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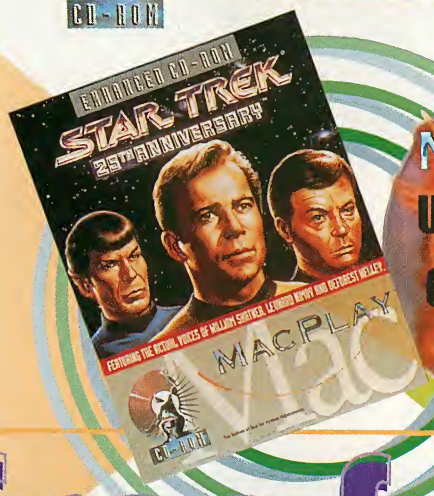

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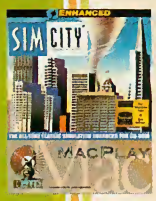

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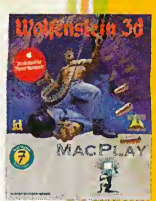

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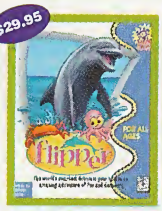

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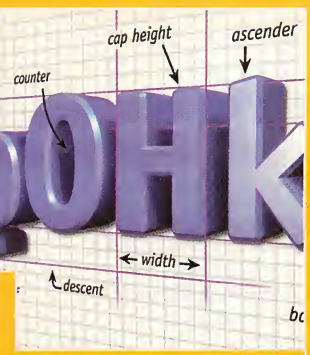

Pohk me—I think I'm dreamin'!

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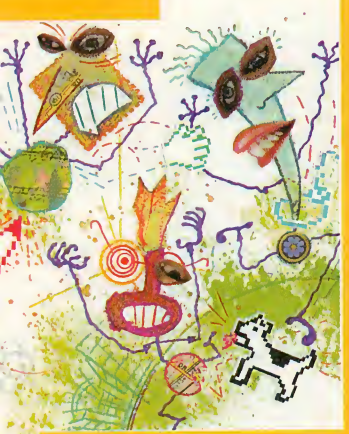

MOOF! Play the MacAddict board game—you won't find it anywhere else—and join the frenzy!

how to

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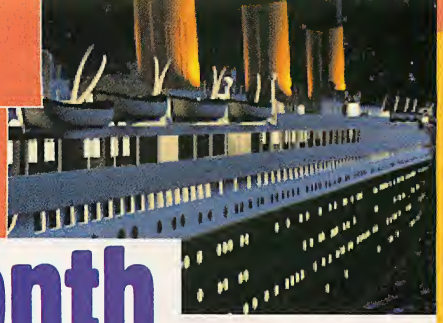

Will Titanic float your boat or sink your ship? Check out the MacAddict review!

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online

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26 You're a Mac addict and you want your fill of Mac news—right here, right now. We can help. (If you're a normal, healthy individual with outside interests and a firm grasp on reality, we can deal with that as well). Mosey on down to the MacAddict Web site and we'll show you how and where to find the best Mac news on the Web—or double your bandwidth back!

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NE: Enough with the clipart. DR: We're going to tell Sue. Jeff: It's your turn to go to the store. Beetman: YRMW. CE: Woof! Sammy's the cutest. Happy Mac Valentines!

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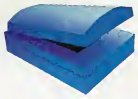

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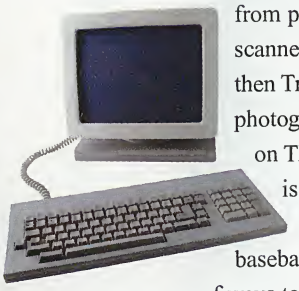

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editor's note

Self-policing isn't pretty, but unfortunately it's sometimes necessary.

Some people "steal" things because they don't understand the rules of the game. Other people do it maliciously—they know that what they are doing is wrong and they do it anyway. If the theft happens in your neighborhood, you call the police. If it happens at your office, you call security. If the theft involves the copyright to a valuable invention, you call a lawyer. But if the theft happens on the Internet, with a small file of no clear monetary value, whom do you call?

That's a tough question. Self-policing is not pretty. No one likes to be the community crank. Yet, if someone steals something and doesn't admit it, apologize, and rectify the situation, then maybe it's time to put self-policing into action.

Is this just a general ramble about the Internet and freedom of speech and copyright? No, it's more specific than that. You see, as much as we hate to admit it, two of the top three entries in the sound category of our custom-painted Power Mac contest (Dec/96, p50) were submitted by individuals who did not create them. Worse, one of the individuals was awarded the top prize.

One of the runners-up, Mike Miller, submitted a sound that is part of Dave Ulrich's Wacked Sounds shareware collection. We'd love to tell you whether Mike realized that he was violating copyright law or not, but he's no longer at the phone number or address that he supplied. Fortunately, we had not sent his runners-up prize when we found out the truth about his submission. We could have done many things with the prize, for example, rejudging the contest, but we're giving it to Dave, a person who shared with the Mac community, only to have his work stolen.

The far bigger issue is with the winner of the Mac for the sound category. After the December issue appeared, we received letters from several folks stating that the winning sound entry, Funky Mac, was originally created by Eric Hausmann and had been posted on AOL and several BBS communities for at least a couple of years under the name of MacFunkee. (One of those writing in was Jeff Click of Clixsounds—one of his sounds, Heavenly Welcome, had been published on our CD under the name of John Bassing.) Uh oh.

So, we downloaded Eric's version of MacFunkee and compared it with the winning Funky Mac entry. Identical. I asked Eric to send more proof that the file was created by him. Got it. Asked the winner to do the same. Never got it.

We then explained copyright issues to the winner—under copyright law, items posted online are considered copyrighted even if the owner has never filed for an official copyright. He seemed to understand, but then refused to return the Mac, so that we could award it to Eric. In his reasoning, MacAddict erred in awarding him the Mac, even though contest rules stated that entries had to be previously unpublished. While I could go on about MacAddict's legal rights, I won't because that is, in many ways, beside the point.

The real issue is the somehow skewed reasoning that if material is on the Internet, it's fair game to be used and claimed as one's own. There are no consequences unless you get caught and someone initiates legal action. Otherwise, hey, what are you going to do to me?

That's where self-policing comes in. We thank those who alerted us to the origins of the files. It seems that in these days we need to look out for each other. As I write this in early December, the sound contest winner has finally promised to return the Mac. We hope to see it back in our offices soon. —*Cheryl England*

If a file of no clear value is stolen, whom do you call?

Five Questions: Marco Landi, Apple's Chief Operating Officer

In November, we met up with Marco Landi, Apple's Chief Operating Officer, at a trade show. We didn't have long to chat, but we did pick Landi's brain a bit about what to expect from Apple in 1997.

What's new about Apple this year?
ML: We're entering 1997 with a totally different situation than in 1996. Our finances and inventory are under control—now we can execute our strategy with confidence.

What is Apple's financial situation?
Our operating expenses have dropped almost $50 million since early 1996. Now our expenses are at a level we can afford. We have $1.7 billion in cash and we've reduced inventory from $2 billion in early 1996 to $662 million—that's a record low for us for inventory versus run-rate. And our margins are back up to 22 percent. We've reduced manufacturing costs and made efficiency improvements.

What is your strategy for 1997?
Segmentation, focus, solutions, and superior value. We will focus on various market segments such as enterprise, education, and consumer and we will prioritize within those segments. We will also focus on ease-of-use, performance, compatibility, connectivity, and industrial design.

What is your OS strategy?
First, we've got to clearly identify the solutions where we want to play. Our OS strategy depends on this. Then we will define the modern OS. We're in a major war to provide an alternative to Windows. NT is wrong for customers. We will propose something with the Intranet that is vastly superior.

What will consumers see in early '97?
We'll introduce a new brand and image campaign with a strong merchandising program, point-of-purchase displays, billboards, more training and more space in retail outlets. We'll have products for $1500 to $2,000 for retail. —CE

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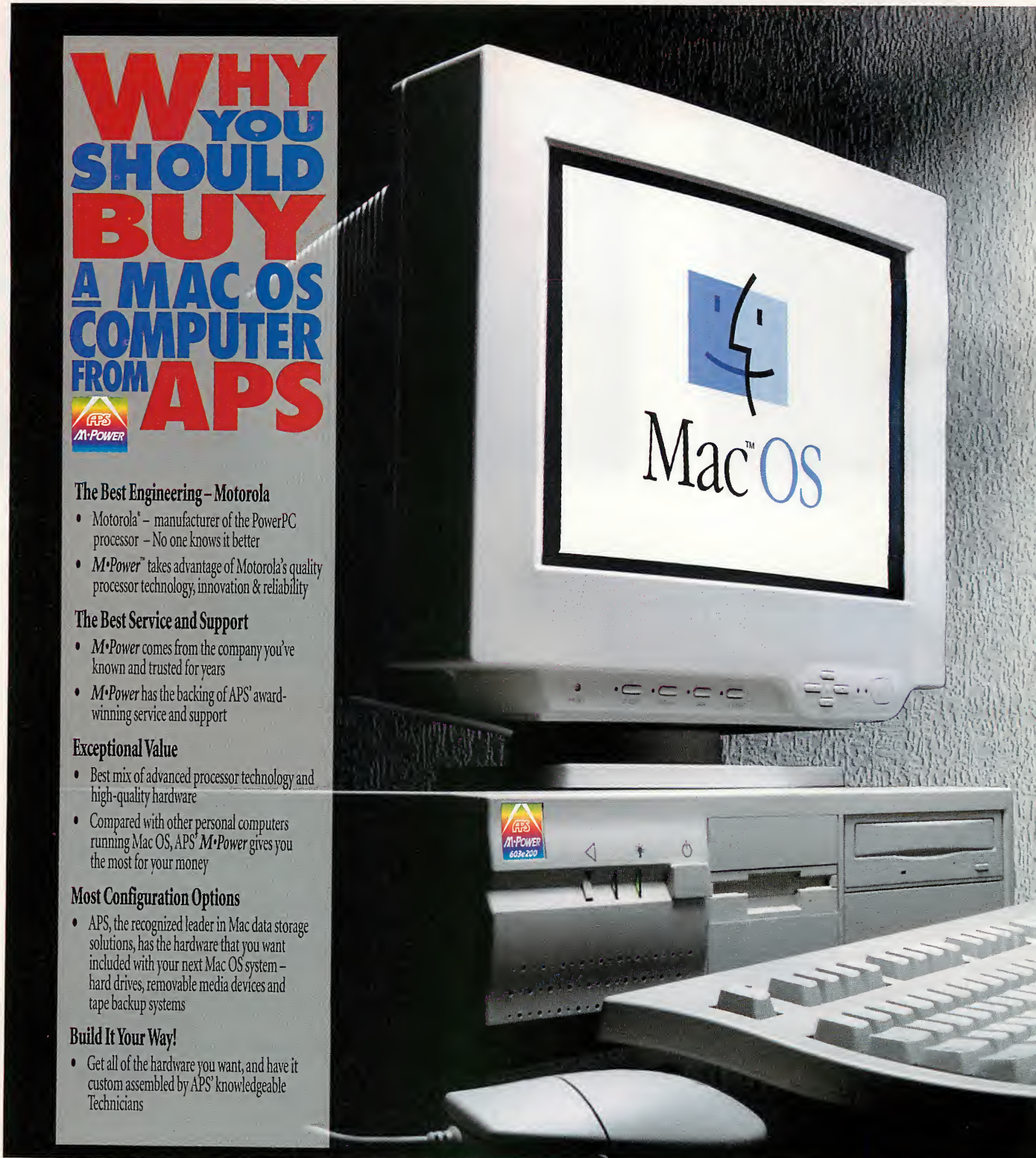

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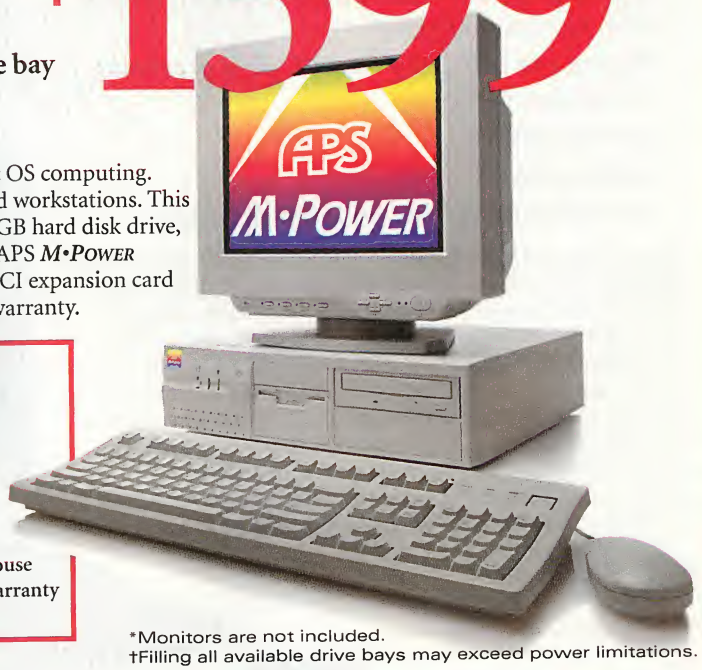

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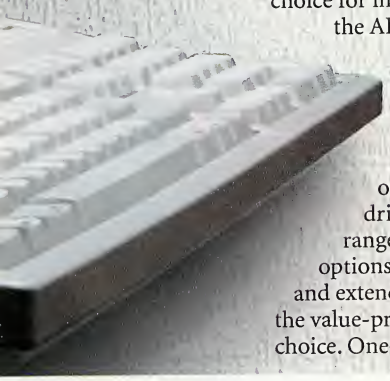
†Filling all available drive bays may exceed power limitations.



Outstanding performance at a terrific price, the APS *M•Power* 603e200 is the bang-for-the-buck system of choice for individual and institutional users alike. Powered by Motorola's 200MHz PowerPC 603e processor, the APS *M•Power* 603e200 comes ready for action with a 1.2GB hard drive, and 10X CD-ROM. Run most applications in the installed 16MB of system RAM (upgradable to 160MB) and enjoy the exceptional performance afforded by the 256KB of Level 2 cache and 1MB of VRAM. Three PCI slots and one available 3.5" low profile drive bay lets you add a whole range of PCI card and peripheral options. With the included mouse and extended ADB keyboard, this is the value-priced performance system of choice. One-year limited warranty.

603e200

- 2-5.25" Half Height Internal Bays†
- 2-3.5" Low Profile Internal Bays†
- 3-PCI Expansion Slots

INTERFACES

- Printer Port
- Modem Port
- ADB Port
- SVGA Monitor Port
- Supports 14", 15", 17" & 21" Monitors
- SCSI Port
- 16-bit Sound Output Port
- Rear Headphone Jack
- Microphone Jack

INCLUDES:

- 10X CD-ROM
- 16MB RAM
- 1.2GB HD
- Floppy Drive
- 1MB VRAM
- 256K L2 Cache
- ADB Keyboard & Mouse
- Desktop Case

Don't see a system that fits your needs? Build it your way ! Turn the page

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APS *M•Power* 604e200™

$2599*

- High-performance mini-tower PowerPC system at an exceptional price
- Blazing fast 200MHz PowerPC 604e processor
- 2.5GB hard drive
- 10X CD-ROM
- 24MB of RAM
- Five PCI slots and five available drive bays

Blinding speed and exceptional value set this high-performance PowerPC, Mac OS workstation firmly at the top of the heap. The APS *M•Power* 604e200 comes equipped with a gigantic 2.5GB hard disk drive, an 10X CD-ROM drive, and 24MB of RAM (upgradable to 160MB of EDO DIMM RAM) – and that's just for starters! Turbocharged with 2MB of VRAM and 512K of Level 2 cache, the APS *M•Power* 604e200 includes five PCI slots for video, networking, peripheral expansion and other PCI-based cards. The roomy mini-tower design includes five available drive bays for optimal customization of the high-end *M•Power* 604e200. One-year limited warranty.

604e200

- 3-5.25" Half Height Internal Bays†
- 5-3.5" Low Profile Internal Bays†
- 5-PCI Expansion Slots

INTERFACES

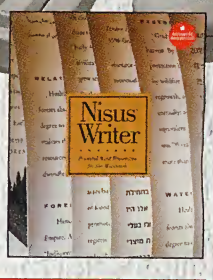
- Printer Port
- Modem Port
- ADB Port
- SCSI Port
- Supports 14", 15", 17" & 21" Monitors
- SVGA Monitor Port
- 16-bit Sound Output Port
- Rear Headphone Jack
- Microphone Jack

INCLUDES:

- 10X CD-ROM
- 24MB RAM
- 2.5GB HD
- Floppy Drive
- 2MB VRAM
- 512K L2 Cache
- ADB Keyboard & Mouse
- One-Year Limited Warranty
- Mini-Tower Case

*Monitors are not included.
†Filling all available drive bays may exceed power limitations.

APS is now bundling Nisus® Writer 4.1 at no extra charge with all of its formatted hard drives and *M•Power* systems.



COMPARISON

	5.25" Intl. Bays	3.5" Intl. Bays	PCI Expansion Slots	Printer Port	Modem Port	ADB Port	ADB Keyboard	ADB Mouse	PS/2 Port	SVGA Monitor Port	Supports 14", 15", 17" & 21"	SCSI Bus	IDE Bus	16-bit Sound Output Port	Rear Headphone Jack	Microphone Jack	CD ROM	Hard Drive (GB)	RAM	L2 Cache	VRAM (MB)	Floppy Drive	Price
APS 604e200 Tower System	3	5	5	✓	✓	✓	✓	✓	✓	✓	✓	1	✓	✓	✓	✓	10X	2.5	24	512K	2	✓	$2599
POWERTOWER 200e Tower System	3	2	3	✓	✓	✓	✓	✓	-	✓	✓	1	-	✓	✓	✓	8X	2	16	1MB	2	✓	$3595
Power Mac 9500/200 Tower System	1	3	6	✓	✓	✓	-	✓	-	✓	✓	2	-	✓	✓	✓	8X	2	32	256K	2	✓	$4199

Comparison information for Power Computing taken from http://www.powercc.com
Comparison information for Apple taken from Apple Computer ads and documentation

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Prices and specification are subject to change without notice. Computer case may not exactly match images shown. M•Power systems are not covered by the 30-Day Money-Back guarantee polic

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**Minimal configuration includes listed Motherboard, standard enclosure, floppy drive, ADB keyboard, and an ADB mouse.*

System must ship with a CD-ROM or CD-R, a minimum purchase of 16MB of RAM, and 1MB of VRAM or a graphics card.

Basic Systems			Drive Options (internal)			Drive Options (internal)		
603e160	$999.00*	____.__	10X CD-ROM (IDE)	$99.95	____.__	1.2GB HD (IDE)	199.95	____.__
603e200	1,199.00*	____.__	12X CD-ROM (SCSI)	179.95	____.__	2.5GB HD (IDE)	299.95	____.__
604e200	1,599.00*	____.__	2X6 CD-R (SCSI)	399.95	____.__	3GB HD (IDE)	399.95	____.__
			4X4 CD-R (SCSI)	899.95	____.__	1.2GB HD (SCSI)	249.95	____.__
			8X 4 Disc CD-Changer (SCSI)	399.95	____.__	2.1GB HD (SCSI)	349.95	____.__
			2.6GB MO (SCSI)	1,699.95	____.__	3.2GB HD (SCSI)	499.95	____.__
			HyperQIC™ (SCSI)	849.95	____.__	4.3GB HD (7200 rpm SCSI)	899.95	____.__
			HyperDAT® (SCSI)	899.95	____.__	9GB HD (7200 rpm SCSI)	1,499.95	____.__
			HyperDAT® Pro (SCSI)	949.95	____.__	Monitors		
			HyperDAT III (SCSI)	1,249.95	____.__	Techmedia 15" Monitor	$299.95	____.__
			Jaz (SCSI)	399.95	____.__	Techmedia 17" Monitor	599.95	____.__
			Nomai MCD 540 (SCSI)	249.95	____.__	Techmedia 20" Monitor	1,299.95	____.__
			230MB MO (SCSI)	299.95	____.__	Sony 17" Monitor	799.95	____.__
			640MB MO† (SCSI)	549.95	____.__	Sony 20" Monitor	1,699.95	____.__

Memory (Prices subject to change)		
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DRAM 64MB	628.95	____.__
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VRAM 2MB	189.95	____.__
VRAM 4MB	329.95	____.__
256K L2 Cache	89.95	____.__
512K L2 Cache	149.95	____.__
Farallon Ethernet PCI Cards		
10Base-T‡	$79.95	____.__
10/100Base-T‡	199.95	____.__
Graphic Cards		
4MB (IMS Twin Turbo 128)‡	$395.95	____.__
8MB (MGA Millennium)	499.95	____.__
External Modems		
TelePort Platinum	$189.95	____.__
Sportster 28.8	179.95	____.__
MacClass MiniTower II	199.95	____.__
APS Online Starter Kit‡	149.95	____.__
Includes Supra 33.6 modem & Apple Internet Connection Kit software		
TOTAL		$____.__

†Available for the tower model only. *‡Available only with M•Power system purchase.*

Techmedia® TCM-1500N Color Monitor

- 15" CRT with a 13.7" viewable image area
- .28mm dot pitch
- Mac resolutions up to 1024 x 768 @ 75Hz
- Digital controls
- Three-year limited warranty

106724 $299.95

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- 17" CRT with a 15.9" viewable image area
- .28mm dot pitch
- Mac resolutions up to 1152 x 870 @ 75Hz
- Non-glare coating
- Three-year limited warranty

MacUser ZD LABS 4½

106725 $599.95

Techmedia® TCM-2000G Color Monitor

- 20" CRT with a 18.75" viewable image area
- .28mm dot pitch
- Mac resolutions up to 1280 x 1024 @ 75Hz
- Non-glare coating
- Invar shadow mask
- Three-year limited warranty

106726 $1299.95

Sony® Multiscan 17sfII Trinitron Graphic Display

- 17" Trinitron CRT with a 16" viewable image area
- Super Fine Pitch™ .25mm aperture grille
- Supports resolutions up to 1280 x 1024 @ 60Hz

MacUser ZD LABS 4½

- Vertically flat CRT
- Thin silica anti-reflective coating to minimize glare
- On-screen display of digital controls

106378 $799.95

Sony® Multiscan 20sfII Trinitron Graphic Display

- 20" Trinitron CRT with a 19.1" viewable image area
- Super Fine Pitch™ .30mm aperture grille
- Supports resolutions up to 1600 x 1200 @ 60Hz
- Vertically flat CRT
- Bonded anti-reflective panel to reduce glare
- On-screen display of digital controls

106379 $1699.95

Price does not include shipping or sales tax. All prices subject to change without notice. *Some of the prices listed in our print advertisements are specials and may not be reflected by the Build Your Own Box offer. Drive options are limited by available bays and power requirements.* *All Prices are in U.S. dollars and are for direct purchase only.*

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letters

You are a verbal group, aren't you? Keep those ideas and letters coming!

This Month

Reading the mail is among our favorite things to do. We love your stories, your comments, your jokes. We only wish we had more space to run all of the wonderful responses. Write to us at: MacDudes, MacAddict, 150 North Hill Drive, Brisbane, CA 94005, or letters@macaddict.com. For CD-ROM replacements or subscription queries, please call our customer service department at 415-468-4869.

GET ON, GET ACTIVE. Talk to us and talk to other Mac addicts on the Web site.

It Ain't So

My friend tells me that IBM owns Apple. Is it true? Say it ain't so. —Julian Bennett, Fresno, CA

Those Mean Moms

So my 12-year-old son brings home this magazine and says to me, "Hey Mom, look at this cool new magazine." I spot the juvenile graphics on the front and I'm thinking, "Oh great, another game magazine. Now he'll be telling me the tips to conquering some inane game that he intends to install on my Ethernet system. Oh, and look here, they've even included a CD."

Now I have two copies, two CDs, a paid subscription, and my son doesn't get them at all anymore. He says, "Mean Mom." I say, "It's my job." —Cyndie L. Klopfenstein

I just got 220,000 in Apeiron, a game I installed from one of your CDs, and I'm pretty darn proud of myself. Not just because of my score, but because I reclaimed my computer as my own... See, Mom's recently become addicted to Apeiron, and for a while there she was whipping my butt. But youth has prevailed! —Matthew Phillips

I had to beg my mom for a week to let me subscribe. She was afraid it would make me use the computer too much. Tell me, what's too much on a Mac? —S. Seto, San Mateo, CA

Dude!

What's up everybody!! Well, as you can see, I got back on the Net! In case you don't remember me, I've faxed you guys twice from work, that place known as my own personal hell. Anyway, since I last faxed (Jan/97, p10), I have been fired from the den of lawyers due to my unprofessionalism and my blatant attacks on their PCs. Maybe the war paint and battle cries were a bit too much, or maybe they didn't appreciate the fact that I was scalping my victims. Then again, it might be all the stickers I posted, or the fact that I would run down the hall screaming, "I hate this place! Long live Apple! Long live the Mac!" Anyway, I've been sent back to the streets to once again run wild with my fellow bike messengers. To live a life of freedom, to fly like the wind, and to run over as many scum-sucking yuppies as possible!

I'm off to Venice Beach right now, but as always, you guys rule, and also... Please give me a job! Later! —Reuben E. Reynoso

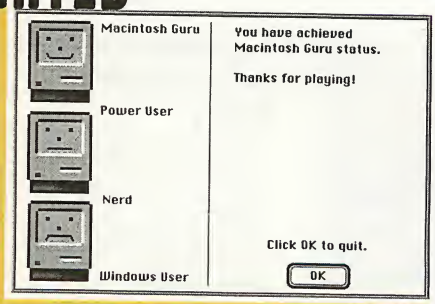
Um, Reuben, this may come as a surprise, but we all kind of expected something like this might happen...

OK, We Hedged

A friend is interested in buying a Performa 6400/200 and running Finale, a music composition application. I'd like to find out what kinds of specialized software won't run on 603 systems, and if this application is one of them. —Jay Harris

When we said that some specialized software might work only on 604 systems, we were hedging our bets. The PowerPC 604 processor includes some instructions that a 603 does not, so there is some tiny chance that some odd application might require a 604 instead of a 603.

RECENTLY SIGHTED



A Self-Made Guru

Daniel Tomasch of Millheim, Pa., sent in a whole bunch of stuff for us, from custom icons to a file with some airline jokes (a few were even funny). Why did he send us all of this? Because "not to get mushy or anything, but... I love you guys. (Sniff.)" Sounds like a suck-up to us, but nonetheless we liked his Official Mac Guru license enough to give it this bit of space in this month's issue.

GOT A MAC SIGHTING? SEND IT TO US!

Rest assured, however, that mainstream applications such as Finale will run on any flavor of PowerPC chip.

GOSH DARN IT!
The review of Fractal Design Expression (Dec/96, p64) was actually a preview of the product and was written using an early beta version. The preview should have been marked as such and the program should not have been rated. The preview should have also noted that some problems such as slowness could be attributed to the fact that Expression was still in beta. Terribly sorry for the confusion—look for a review of the shipping version in an upcoming issue and on our Web site.

Oh, Please Calm Down

Hi. My name is Eric. Um... I'm a... Mac addict. I didn't think it was true... gasp... but it is... I am addicted (sob). I really thought I could handle it, until I went to the bookstore after having seen the November issue online... and what should my ears hear but the fateful "death chime" of the clerk saying, "Sorry, we no longer have that issue."

WHAT!? I have to have it! The guy in the cubicle next to me at work has one, but he won't share his CD—something about catching a virus. I had the shakes last night. I'm hurting real bad. My wife asked if there was something wrong. I said, "Nothing, it'll be OK." But it's not.

Oh, the thrill of exploring the CD, the panache of the articles and relevance to my needs. I was thinking of buying a 3D app and saw the issue—"Perfect timing as usual!" I said to myself. "I will take my hard-earned cash and retrieve this cool yet viable periodical." But noooo! I think the clerk had a judgmental glint in his eye as I staggered out of the store.

Today, I finally found a telephone cord that is long enough to reach out the window so I could send you this before I jump. Hmmm... Someone is shouting something. They have set up an inflatable cushion... probably to catch the PowerBook! I just cannot go on without my November issue (sob). Please... please... whatever it takes! I have to have my wrapped-in-plastic mag and CD! Please respond, let me know someone out there cares. —Eric Brown

Go Quickly!

In the November issue (p102), someone wanted to know where to find Oscar The Grouch, an "outlawed file." The response said it was "pulled from distribution." This is untrue! The file was only pulled from Info-Mac sites. It can be found at other Mac sites such as <ftp://ftp.funet.fi/pub/mac/sysext/grouch.sit>. —Todd S. Meyer, Sciota, PA

As of October 12, 1996, Oscar The Grouch was still at <http://www.eskimo.com/~pristine/softindex.html>.
—Bob Longstreath
You'll have to go to these sites quickly, before Oscar disappears from them, too!

Huh?

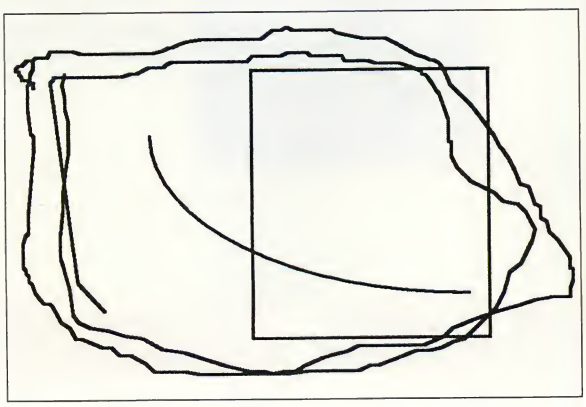
I'm quite disturbed that when I see a piece of software that says "Requires 386 and Windows 3.1 or better" it won't run on my Quadra 610. Any ideas? —Ira Lieman, Hoboken, NJ

Hey, guess what? Of the many uses for the Mighty Macintosh, my personal favorite is "Geek-Off." Just thought you'd like to know. —John Moore IV, Virginia Beach, VA

I just wanted you to know that I think I like rats. —Paul

True Inspiration

Look, I drew a picture in Microsoft nerd. I mean Word. —Joey Cooper, 12, Middletown, IN
Yeah, we've always been impressed with Word's drawing features, too...



The art that Word inspired. Watch out—Word's Auto Correct tool will straighten all those curves.

MacAddict has inspired me to change the "Welcome to Macintosh" greeting during startup to "Macs Rule, PCs Drool" via ResEdit. —Willy Rivet

DEMONIC

AN UNABASHED SWIPE AT WINDOWS 95, SUNG TO THE MELODY OF ALANIS MORISSETTE'S "IRONIC"

It's a Microsoft product
that claims to be great

But like its predecessor
it's just second rate

Like OS/2
it has a similar fate

It's a graphic in-ter-face
about 12 years too late

Yes, Windows is demonic
. . . don't you think?

Chorus:
They want you to believe that it works like a Mac
Although it was designed by someone high on crack
If Windows 95 could simply fade into black
The world would be soooooooo much better. . .

He bought an IBM clone
'cause he liked the low price

It came with Win 95
to add a little bit o' spice

He hit the Return key
(That was a roll of the dice!)

As his system crashed down,
he said, "Well, this isn't nice!"

Yes, Windows is demonic
. . . don't you think?

[Repeat Chorus]

It's a simple subterfuge
this Win 95

Its hype is so thick you
can cut it with a knife

If you'd bought a Mac the first time,
you wouldn't have this strife

(Spoken)
If you want the machine of your dreams,
you'd better get a clue, not a life

Yes, Windows is demonic
. . . don't you think?
A little_too_demonic
and I really do think

[Repeat Chorus]
[Shut Down]
[Power Off]

Lyrics © 1996 Robert Hanson. All rights reserved.
However:
Dealer participation may affect final consumer cost.
Your mileage may vary.
Certain conditions & restrictions may apply; ask your sales consultant for details.
See your dentist twice a year.
And don't forget to put the seat down when you're done!

the disc

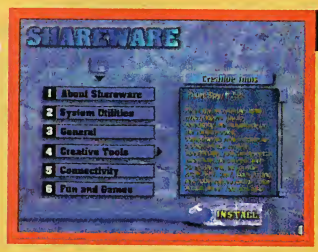
Now, more fonts per megabyte than your average high-fiber breakfast cereal.

DEMOS

Take a tour through Timelapse, Phototools, Pajama Sam, and Mega Math Blasters! There are links to the vendors' Web sites, too!

THIS ISSUE

Turn to this screen to find programs and files mentioned in the magazine. Whenever you see a disc icon in print, you'll know to come here on the CD.

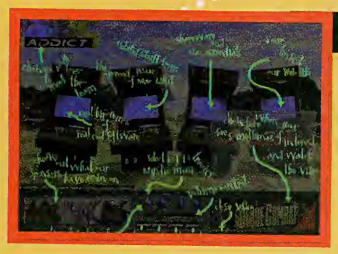


SHAREWARE

Here's where you'll find enough shareware and freeware to satisfy even the most demanding hard disk's appetite. Come here to turn your machine into a big Mac!

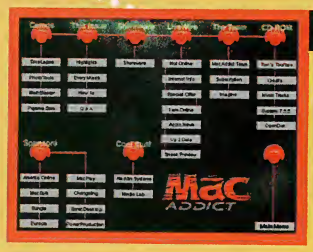
LIVE WIRE

Betcha didn't know that the Internet was powered by pyramids. Turn here to link to MacAddict's Web site.



HELP ME

This helpful screen is available on all five major screens. All controls are carefully explained.



INDEX

Use this handy jumping point to get to any other screen on The Disc.

You asked for it—you got it. You asked for tons of fonts and we are happy to oblige. Go to the "This Issue" section, dial up highlights, and gasp in awe at the cornucopia of faces. Anything else? Icons, clip art, the moon? Write to letters@macaddict.com and we'll see what we can do. Oh, yeah, just don't click on any MacAddict logos. Curiosity killed the cat, you know.

GETTING STARTED

1. Pop The Disc into your CD-ROM drive.
2. Double-click the Start Here icon for your System.
3. Have fun!

REQUIREMENTS

Any Mac can access the shareware, demos, and System software from the Finder. Accessing the full CD-ROM interface requires 12MB of real RAM with System 7.1 or earlier; 16MB of real RAM with System 7.5 or later.

OUR DISC SPONSORS

To get immediate information from our sponsors, go to the Index (Option-click any help screen). Or you can wait until you see a message from a sponsor in the lower-right-hand corner of the main screen. Clicking on the message causes a TV screen to slide down from the top of the page, showcasing more information. Sponsors can also be accessed from the main window in the Finder.

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America Online offers access to the world of online news and information, interactive magazines, finance, entertainment, e-mail, free software, shopping, and more. With a point and a click, you can explore the vast resources of the Internet. Sign on and receive 15 free hours.

Bungie—Marathon Infinity

800-295-0060
http://www.bungie.com

Marathon Infinity contains "Blood Tides of Lh'owon," a brand-new 30-level scenario, "Forge," Bungie's own powerful Map Editor, and "Anvil," a single tool for easy modification of shapes, sounds, and physics models.

Changeling—Amber

800-769-2768
http://www.changling.com

Journey into the unknown, exploring supernatural realms of extraordinary beauty and haunting elegance. Unravel mysteries hidden within compelling stories of heart-numbing tragedy, mind-numbing obsession, and child-like innocence. With amazingly life-like images, subtle environmental sounds, a compelling soundtrack, and thoroughly developed characters and stories, Amber: Journeys Beyond will completely immerse you in the experience of several lifetimes.

Europa Software—Web Quick

http://www.europasoftware.com

Frustrated by Bookmarks? Web Quick tracks every page you visit, and automatically organizes the page list by Site. It lets you create custom Topics—and keeps them all at your fingertips with handy pop-up menus. Web Quick even converts existing Bookmarks. No wonder MacWEEK calls it "the first Web utility that is essential"!

GT Interactive—ZPC

http://www.gtinteractive.com

ZPC places the player as Arman, a fourth-generation Psionic War Messiah recently released from cryogenic imprisonment. With no memory of his illustrious heritage, Arman has few clues to his true mission: save his people, vanquish the evil occult group known as the Black Brethren, and utterly destroy the Dark Being they worship. Only then can he reclaim his Psionic crown and unite his followers.

MacPlay—MacPlay Catalog

800-4MACPLAY
http://www.macplay.com

Star Trek Starfleet Academy—With Captain Kirk, Chekov, and Sulu as your Starfleet Academy instructors, you and your crew will battle over 30 menacing 3D-rendered alien ships in the first-ever STAR TREK flight simulator. Are you bold enough?

Pro • Pinball—Finally, a Mac pinball game that goes beyond the arcade experience. It has everything you want: realistic flippers, ramps, loops, drop targets, grab magnets, sink holes, jet bumpers, and, of course, realistic balls.

Descent II—Blast your way past enemy robots with powerful new tools, leaving their flaming hulks in your exhaust. It's all-new levels of outrageous destruction, with new weapons and enemies! Power Mac required.

MacSoft—Prime Target

800-229-2714

A powerful senator is brutally murdered while working late in her Washington, D.C. office. Now you must solve the mystery of her death in this action-packed 3D shoot-'em-up. Prime Target thrusts you into the most dynamic Mac gaming world ever. Blood spatters on the wall. Glass shatters in your face. And the interactive mystery challenges your intellect as you hunt the senator's killers in Washington's corridors of power.

PowerProduction—WebBurst

800-457-0383
http://www.powerproduction.com

WebBurst gives the Internet a facelift! It puts a new wave into surfing the Net. Interactive sound and motion can now be experienced with any Java-enabled browser. And it's drag-and-drop-easy to create. No coding, no compiling necessary! Just add it to your existing Web page.

Sonic Desktop Solutions—SmartSound For Multimedia

800-454-1900
http://www.sonicdesktop.com

Now you can quickly create music or sound effects customized to your exact specifications. This revolutionary new software makes the job easy while always giving you professional results. Try the demo on the enclosed CD and you'll see why SmartSound is the Absolute Easiest Way To Create Customized Professional Quality Soundtracks.

Westwood Studios—Westwood Chat

800-874-4607
http://www.westwood.com

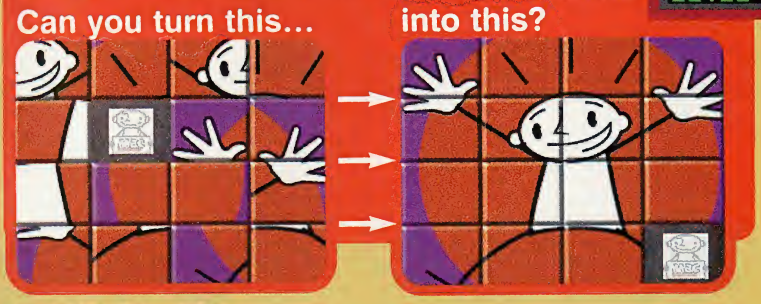
Need a place to find other Mac gamers!? Try out the new Macintosh version of Westwood Chat—the program that lets you talk with other gamers around the world in real-time! And with the new Internet-ready games by Westwood Studios, you'll be able to challenge people all over the planet to great games like Monopoly and Command & Conquer!

CONTEST

Win!Win!Win!

Amazing digital audio software: BIAS Peak!

Dastardly Tom Hale scrambled Max into 16 pieces! (The nerve of some people.) Help Max screw on his head right. Pop in the CD-ROM and look for a secret hotspot. You'll be *automagically* transported to a hidden area of The Disc. When you solve the puzzle, the CD-ROM will give you a code. Enter this code on the MacAddict Web site for your chance to win a copy of BIAS Peak, an easy-to-use audio waveform editor. Good Luck!



HELP

You Have a Problem?

What! You need help? If your super-phat disc is mangled, warped, broken, or otherwise disturbed, you can get a replacement from IMAGINE's customer service. We've set up a special page on our Web site where you can order one<http://www.macaddict.com/info/service.html>, or you can call them directly at (415) 468-4869. If you can't install anything, or get disk errors, do the same.

If you have another problem with The Disc, please stop by <http://www.macaddict.com/cdrom> before you send us e-mail. If there isn't a solution there, then please let us know about it at letters@macaddict.com.

If you're having problems with System software, we recommend calling the good folks at (800) SOS-APPL. They'll be more than happy to help you.

And if you are having trouble with one of the programs on our disc, please be sure to read the accompanying read me for contact info. To make it easier for you to find help for the programs on The Disc, we've conveniently added e-mail and Web contacts in the Shareware and This Issue sections. Whenever you click on install, you'll find the following helpful dialog:

FINALLY, A DIGITAL CAMERA

WITH EVERYTHING YOU NEED

TO UNLEASH THAT MAD,

IMPETUOUS ARTIST WITHIN.

640 x 480 Resolution, 24-Bit Color

Built-In Wireless Infrared and Serial Interface

1.8" Color LCD Screen

Stores 108 Images at 640 x 480

Built-In Flash

Video Output for TV

Rechargeable Lithium Ion Battery

Mac® and PC Connection Kit Included

Sony's Progressive Scan CCD

Oh-la-la, make room in your imagination for the pocket-size Sony DSC-F1. Then simply aim, shoot and save up to 108 sharp, clear pictures for instant downloading of your creative genius. The DSC-F1's all-encompassing list of features includes a LCD screen for instant review, wireless* transfer of images, and of course, Sony's leading CCD technology for outstanding image quality. Making it the crème de la crème of digital cameras.

Integrated LCD screen.

For more information on the Sony DSC-F1, just call 1-800-352-7669 or visit www.sony.com/technology. And turn your work into a work of art, tout de suite.

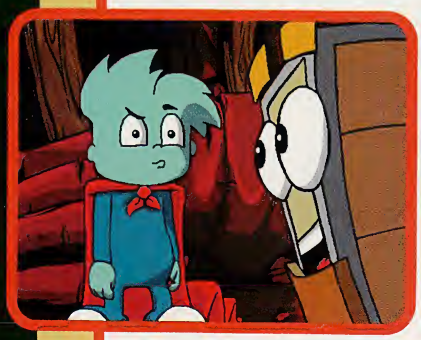
SONY

©1996 Sony Electronics Inc. All rights reserved. Reproduction in whole or part without written permission is prohibited. Sony and the Sony logo are trademarks of Sony. Windows is a trademark of Microsoft Corporation. Mac is a trademark of Apple Computer, Inc. Screen images are simulated. *Supports Microsoft Windows® 95 IrDA Device Driver Version 2.0 (included). IrDA adapter for computer required.

DEMOS

Demos are versions of commercial products that are not fully functional. Play them directly from The Disc, or copy them to your hard disk. This month we bring you a plethora of children's software demos. If you want to escape out of a demo, usually typing cmd-. (period) will return you to our application.

1. Pajama Sam



In "No Need To Hide When It's Dark Outside," it's your job to help Pajama Sam find his flashlight and lunchbox so he can capture darkness and put him in the lunchbox. The demo has four different sites to explore. Each site has a puzzle to solve and has plenty of wacky objects for kids (and grown-ups) to click on. The first time you play the demo it will test your CD drive for speed. Turn to our review (p89) to see what the kids thought.

2. Timelapse

Timelapse will transport you to exotic places. You'll need to solve puzzles in the pyramids, make mincemeat of the Mayans, and outwit the Anasazi. Your quest begins on Easter Island where you find an alien device which eventually leads you to Atlantis. With amazingly rendered scenery and responsive navigation, this new point-and-click-adventure is sure to please.

3. Mega Math Blasters

Mega Math Blasters is an out-of-this-world way to learn math while pretending to be a space hero. This non-interactive demo will give you a taste of the many brain teasers available in this title. Each game helps your children build their math skills. Stop Gelator before he takes over the galaxy!

4. PhotoTools

What's a plug-in folder without plug-ins? What's a Mac app without palettes? Add Extensis Photoshop plug-ins and see what a difference a few smart tools can make. PhotoText alone is enough to make any Photoshop-head's jaw drop in awe: you can place text over an image, and change its attributes. Before placing the text, you can add more text, deselect it, and reselect the first bit. Amazing!

Also on The Disc

In addition to these four demos, you'll find nine more demos on The Disc. They are not accessible from our interface, though. You'll need to open up the Demos folder in the finder. Along with productivity tools, the mega-cool Disc also contains demos of two more children's programs.

The demo of Just Me and My Mom offers the first page of this popular children's book. Little Critter narrates his trip to the city with Mom. See Little Critter buy train tickets to the city. Watch out for the froggie!

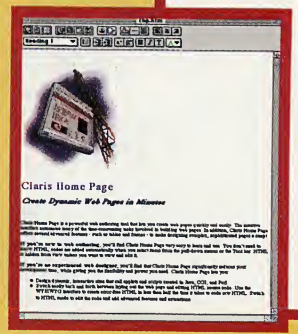
In this demo of Elroy's Costume Closet you can clothe Elroy in just about any costume. Choices range from a busy bee to a freaked out frog to a noble Knight. Elroy offers snappy commentary as you dress him.

LET'S MAKE BEAUTIFUL MUSIC TOGETHER

This month's Disc features music created by MacAddict readers. Gregory Brettell and Laura Lopez created tracks one (Obsession) and two (I Know You Really Wanna) on a IIsi. Seventeen-year-old Chuck Latshaw made tracks three (Lunatic) and four (Groove Train) on a Performa 550. Would you like to see your name in lights? Send your recordings and a photo (in any digital format—no tape cassettes, please) to: Music Mavens, MacAddict, 150 North Hill Drive, Brisbane, CA, 94005. If we like it, we'll use it on a future Disc. Please do not send us the theme to the Simpsons! All recordings must be your own original material which you made from scratch and haven't yet published. You do retain all rights to your work and just give us permission to use it on The Disc. Your music, of course, should be made on a Mac!

AND THE WINNER IS...

Jason Denonville from Florida decoded November's CD-ROM contest. He'll be creating Web sites galore with his new copy of Claris Home Page. Turn back to page 17 to read all about your chance win BIAS Peak.



Have You Played It Yet?

THE MOST ADVANCED MAC 3D SHOOT-EM-UP EVER!

Election Eve, 2004 A.D.

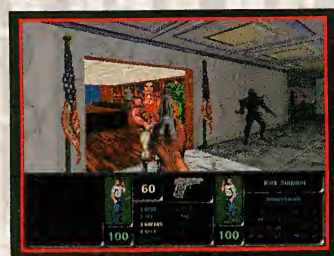
A powerful senator is brutally murdered while working late in her Washington D.C. office. Now you must solve the mystery of her death in this action-packed 3D shoot-em-up. Prime Target thrusts you into the most dynamic Mac gaming world ever. Blood splatters on the wall. Glass shatters in your face. And the interactive mystery challenges your intellect as you hunt the senator's killers in Washington's corridors of power.

$34.99

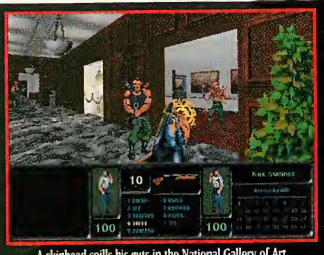
MSRP: ~~$49.99~~

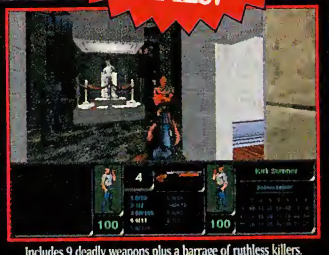
System Requirements: Any PowerMac or compatible with a CD-ROM drive and color monitor.

BATTLE YOUR FRIENDS WITH AWESOME NETWORK GAMES!


Incredibly intense 3D shoot-em-up action.

Weapons recommended when entering the Senate chambers.


A skinhead spills his guts in the National Gallery of Art.


Includes 9 deadly weapons plus a barrage of ruthless killers.

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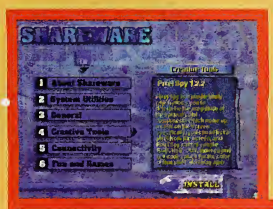


SHAREWARE

FUN AND GAMES

Bubble Trouble

Author: Ambrosia Software
Shareware: $15

Ah yes, another Ambrosia arcade game that's sure to please both kids and adults alike. In Bubble Trouble you are a fish, a fish with enemies, a fish in a bowl of bubbles and bonuses. Push the happy bubbles into the evil fishies and worms. Push gems together to get more moolah.

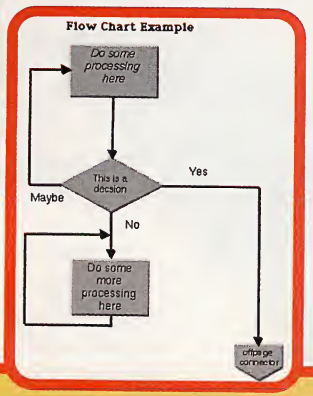
OUR WEB SITE links to the latest versions of software.

CREATIVE TOOLS

Designer Draw

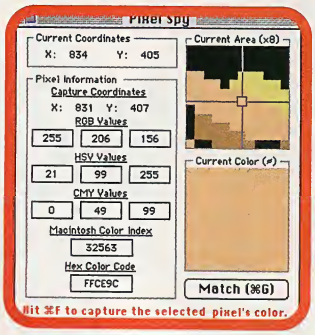
Author: Paul Hyman
Freeware

Need a quick tool to flesh out an idea? Designer Draw is a drawing program that performs basic functions. With just a few tools you can create nifty diagrams. Assemble boxes, arrows, and text in different combinations, and you've got anything from a flow chart to a rough schematic diagram to an org chart.



Pixel Spy

Author: Bryan Horling
Shareware: $5



Pixel Spy is an invaluable tool to anyone creating screen art for CD-ROMs or the Web. To get the color value of something on screen (that's not in your image-editing program), you could do one of two things: scream at your Mac and pull your hair out, or take a screenshot of your desktop, open it in your image-editing program, then use the eyedropper tool to find the right pixel, and finally open up the color picker to get the value. Oh, you wanted that for the Web? You'll need a conversion tool, too.

Pixel Spy saves you from either of these horrendous options. With the program open, your cursor becomes a telescope spying on the pixels that comprise the screen image. Capturing a color displays the pixel's RGB (red, green, blue), HSV (hue, saturation, vector), CMY (cyan, magenta, yellow) values. The program converts the RGB value into hex code, simplifying your Web-editing life. Also for the inner Webmaster in all of us is a color matcher, which picks the color in Navigator's palette closest to the chosen color. This prevents your image from dithering when displayed in a Web browser.

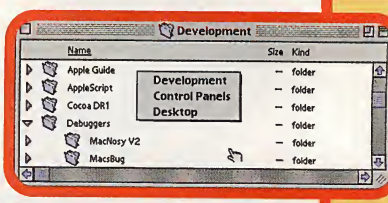
STEFAN'S SHAREWARE SELECTIONS

This close to the date of a new system release—Mac OS 7.6—it's a little dangerous to recommend system utilities. There's a good chance that something will break—system utilities expect the Mac OS to behave in a certain way, and if the system changes, all hell could break loose. That's not to say that utilities will definitely break, but to ward against this possibility, we've included several similar utilities that perform pretty much the same function. If one of the utilities breaks under Mac OS 7.6 and the author doesn't release an update, these other utilities can take its place.

Many programs have a "Window" menu, from which the available open windows can be selected. Having a menu devoted to switching between windows is very useful, especially when the window that you want is buried under several others and you have a smaller monitor. This feature is so useful that when a program doesn't have one, it is sorely missed. Fortunately, there are utilities which add a universal Window menu to all applications, even to the Finder.

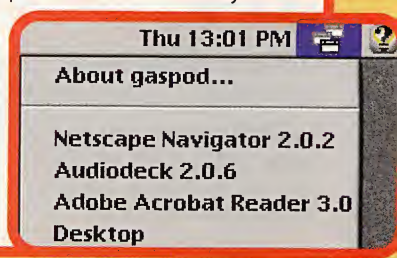
WindowMenu is a shareware control panel/extension combo that cycles through your open windows.

SETTING UP the program is a snap.



NAVIGATE THROUGH your windows using a pop-up menu as shown here, or via the keyboard.

If pop-up menus and keyboard commands aren't your thing, Gaspod and WinMenu are two utilities that add a new menu icon next to the Guide menu. KantaraWinMenu does the same with all OpenDoc parts. —*Stefan Anthony*



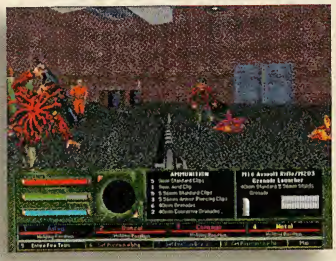
Enough Work. Let's Play.

Command Your Own Squad of Marines in 3D

Take command of an elite special forces unit in this extraordinary 3D first-person shooting extravaganza. Lead four highly-trained marines on six deadly covert missions. Fight for your own life while strategically issuing orders to your squad. All in 3D. So real you'll be a bloody wreck before it's over.

SYSTEM REQUIREMENTS: Any Power Macintosh with color monitor and CD-ROM drive.

MSRP: ~~$49.99~~ $34.99



Incredible Flight Combat Action!

Terminal Velocity is absolutely the most exhilarating flight game available for the Macintosh. It offers fast 3D texture-mapped graphics, full 360-degree flight movement and 7 weapons of extraordinary destruction. Fight your way through 9 unique planets with an awesome array of spectacular air-to-air and air-to-ground combat action.

"...gripping high-speed action from moment one."
-Computer Gaming World

MSRP: ~~$49.99~~ $34.99

SYSTEM REQUIREMENTS: Any Power Macintosh with color monitor and CD-ROM drive.

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THIS ISSUE

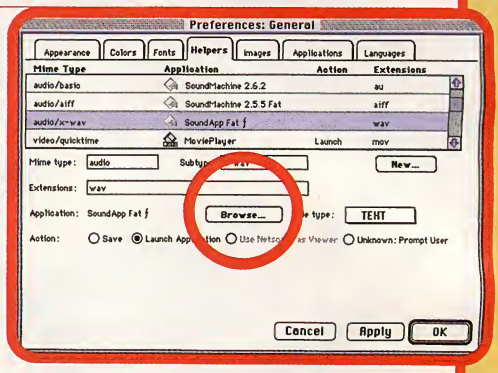
HIGHLIGHTS

You've got a ticket to type and you don't kern. We dipped into our wisdom of fonts to bring you two fabulous features. Once you've learned how to cast type ("Facing Up to Fonts," p36), pop in The Disc. Along with the following fonts, there are several utilities which will help you manage these fonts. You'll also find a demo of Fontographer so you can follow along with Nikki Echler's "Just your Type" tutorial (p48).

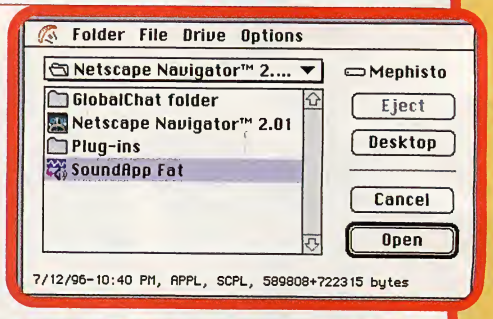
How To

In "How to Add Sound to a Web Page" (p96), contributing editor Joe Holmes walks you through making a sound for your Web site. To play it back in your browser, though, you need to set up a helper app. We've included the utilities Sound App and Sound Machine mentioned in this article. Just installing them on your machine is not enough—you'll need to tell your browser where they are. Here's how to do this using Navigator 2.x. First you must install the files on your machine. We like to keep our helper apps in our browser's folder, unless we use them for something else, too. Launch Navigator.

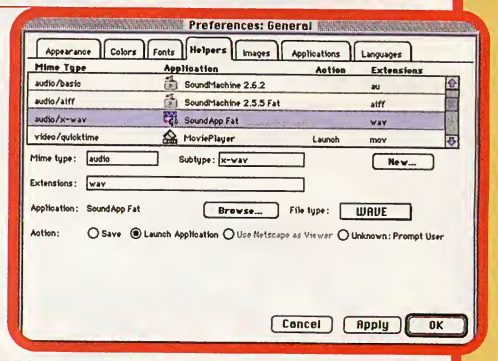
1. Open up the General Preferences, then click on the helpers tab. There are helper apps for many different file types. Scroll down until you see audio in the left column. The grayed out file types indicate that Navigator can't locate the program for that file type. You could fix all the grayed out file types, but when was the last time you downloaded an Excel Spreadsheet? Select Sound Machine or Sound App, then click on the browse... button in the middle of the dialog window.



2. This brings up your standard open dialog. Navigate to where you installed the helper app on your machine. Then click open.

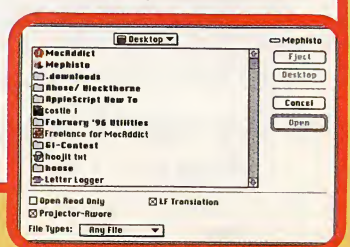


3. The selected file type is no longer grayed out. It's hard to tell this with Sound Machine's icon, because it is gray anyway, but you see plenty of color in the Sound App icon.



Ask Us

One of the many Mac quirks that make you go hmmm... is the appearance of the Open and Save dialog boxes. Apple has the power to stretch them just a bit wider so you can see entire file names but in its inscrutable wisdom chooses not to. Dialog View fixes this by stretching the window and displaying folders names in bold.



AARCOVER

Erode Font

(Alien Language)

FRANKEN TOHO

AmourTendre

Gilligan'S Island

CAT WOMEN

Gogo Big

Chinese Menu

Good Dog Cool

CITY OF 1.0

Gravicon

(Gravicon)

Сфе Цшьут

(Cyrillic)

(Hobofont/Mac)

DINGOS

LeEty Casual

Distress

LingPrint-Brush

Dog Wind

Oz Handicraft

Vintage Typewriter

POPTICS ONE

Warlock

(Potter Stamps)

Sultana

(Rail Signals)

Stone Cutter

(Road Signs)

STEELWOLF

SALOON

Smoothplate

... AND MORE!

Games & More Under $30.00

We asked dozens of solitaire fanatics to help us design the perfect solitaire package. Absolute Solitaire is what they created.

The interface is fast and responsive. Everything works the way you think it should. Want to know all your available moves? Just hold down the option key. Want to know where the visible aces are? It's easy! Plus, you can Redo All, Undo All, get interface shortcuts, change card and background graphics, time yourself to beat your best games, and customize tons of game options.

Absolute Solitaire includes 24 challenging games with on-line instructions for every game. If you're looking for a solitaire package designed for outstanding solitaire gameplay, try Absolute Solitaire!

System Requirements: Any Macintosh running system 7.0 or higher with at least 4MB RAM. Includes full program on both CD-ROM and floppy disk.

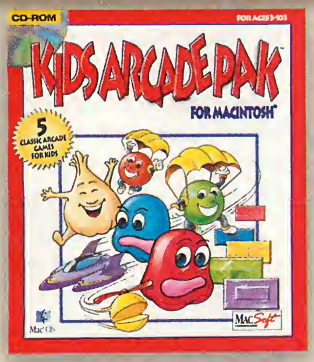
$24.99

Includes many games not available in Solitaire Game Pack,™ Solitaire Antics™ or Eric's Ultimate Solitaire.™

Mac Arcade Pak 2

More red hot arcade action with five of the best arcade classics ever! Modern-day versions of Pac-Man™, Gauntlet™, Asteroids™, Galaxian™ and StarCastle™. Includes a sequel to MacWorld 1995 Hall of Fame and a runner-up for Inside Mac Games 1995 Best Arcade Game.

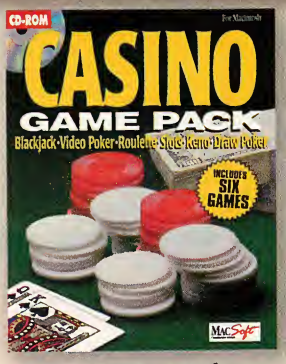
(CD-ROM only) $24.99



Kids Arcade Pak

Kids Arcade Pak is bursting with five classic arcade games designed especially for kids. Each game features large, brightly colored graphics, voice instruction and adjustable difficulty levels. Includes kids' versions of Tetris,™ Breakout,™ Pac-Man,™ Galaxian™ and Pinball.™

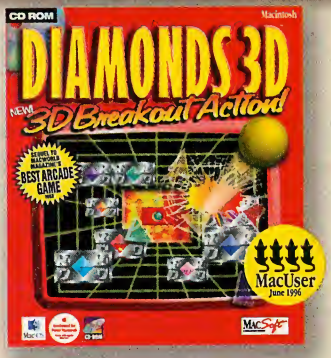
(CD-ROM only) $24.99



Casino Game Pack

Quality collection of six popular casino games: Blackjack, Video Poker, Roulette, Slots, Keno and Draw Poker.

(CD-ROM only) $24.99



Diamonds 3D

Breakout in three dimensions! Inside Mac Games calls it "Fun and addictive. The best breakout-style game we've played." The ball doesn't bounce up and down, it comes right at you!

(CD-ROM only) $24.99

Game Parlor

Outstanding collection of five popular strategy games: Chess, Checkers, Backgammon, Solitaire, Crosswords.

$24.99

(CD-ROM only)

Desktop Labels

Desktop Labels is perfect for creating virtually any kind of label, barcode or mailing up to 32,000 pieces. Includes features found in products priced hundreds more!

$24.99

Photomaker

Whether starting from scratch or editing an existing image, PhotoMaker gives you the powerful tools of expensive programs like Adobe™ Photoshop™ in an affordable, easy-to-use package. Add stunning impact to newsletters, brochures, school projects and more!

$24.99

MacPublisher

A full-featured desktop publisher that gives you the same powerful page layout tools used by the best graphic artists. Use it to quickly and easily create professional quality brochures, invitations, newsletters, flyers or any other document.

$24.99

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the web site

Hello again, gentle readers. As we put pen to paper, we're wrapping up the very last stages of the MacAddict site redesign, hoping with all our might that it'll be live and kicking by the time you read *last* month's issue. We hope you'll be pleased with the results.

Apple Software: New & Improved

Our December roundup of Apple software locations focused on Apple's multitudinous FTP (file) servers. But soon after the issue saw print, Apple's tireless software gnomes repaired and upgraded the once-rickety Web interface to its software libraries. Through an ingenious array of CGIs and scripts, this Web-based interface divvies up traffic among Apple's various FTP servers.

As a starting point, consult the list of software update mirror sites. At the top of the screen are buttons which show you the most recently posted files and let you browse Apple's software library. Recently added are a search feature and an alphabetical listing, available in both U.S. and international flavors.

FIND LINKS to the sites mentioned here on the Website.

Even cooler is the Apple Featured Items page, which brings together download links and Tech Info Library documentation for Apple's latest, greatest software updates. From the System 7.5.5 Update to Open Transport/PPP 1.0, from Cyberdog 1.1 to the Daily Information Alley, it's all here on this one handy page.

A GOOD PLACE TO START: Dig the handy new buttons!

SOFTWARE UPDATES meet Tech Info Library notes, and all your prayers are answered.

More News Than You Can Use

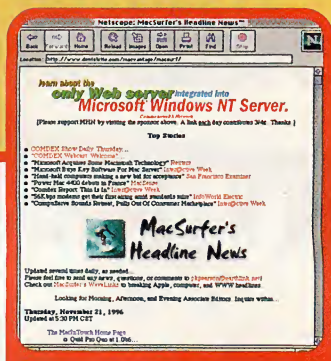
Like most Mac addicts with Internet access and an uncontrollable itch to surf, the advent of the World Wide Web has turned us into ravening-mad news junkies. At the MacAddict Web site, we strive to highlight the most important or interesting news, cramming in links and pointers to the very latest software updates or other scandalous revelations.

Let's say you want more. More news, more super-obscure software updates, more obscure little bugs and all the rumor-mongering your eyes can take in, all of it piped into your browser as soon as it comes off the virtual presses. Where do the really hardcore Mac news addicts park their browsers?

For in-depth news analysis, it's hard to beat "MacWEEK." The venerable weekly magazine now publishes stories daily on its Web site. Editorial frills such as copyediting and fact-checking sometimes keep "MacWEEK"'s coverage a few hours behind other sites, but when it finally weighs in it's worth the wait. We do wish they'd shut up about Be for a little while, though.

Another top-notch production is MDJ, "The Daily Journal for Serious Macintosh Users." This subscription-based newsletter is delivered to your mailbox in either text or Adobe Acrobat format. It'll cost you $14.95 a month, but you can try a two-week free trial before you commit your cash. For more info, see the MDJ Web site.

If it's troubleshooting and bug reports you're after, make a daily visit to MacFixIt and MacInTouch every day. MacFixIt started as an online update to Ted Landau's book "Sad Macs, Bombs and Other Disasters," but like Frankenstein's monster it's taken on a life of its own and has become the premier place to find out about potential problems and their solutions. Ric Ford's MacInTouch Home Page is a bit more general in focus—as well as covering the troubleshooting beat, the well-connected columnist and consultant is privy to tons of gossip and up-to-the-minute info.



FORGET THE TIP-this is the iceberg. More Mac news links than any one human being could digest.

If after all this, your lust for news remains unsated, perhaps you're ready for the raw, unfiltered news-mania of MacSurfer's Headline News. Here you'll find pointers to everything—every scrap of Mac-related news published anywhere on the Web. It's a senses-shattering barrage of sheer data, an effort that inspires both awe at the staff members' thoroughness and sincere concern for their sanity. —*MS*

LIVE WIRE

Since we removed our fake browser and replaced it with one that could actually follow links, we decided it was time to give the LiveWire section a facelift. Come here for the Apple News, Updated Software, and a Sneak Preview of next month's issue.

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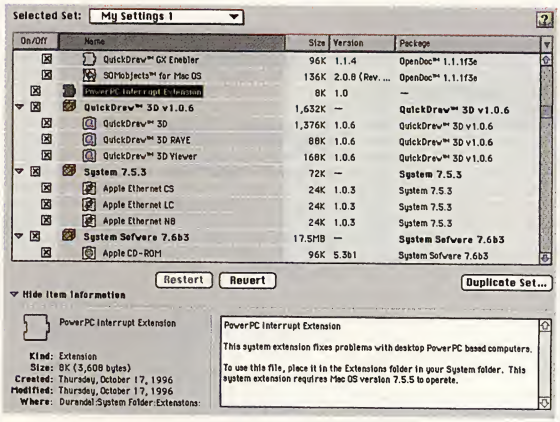
News, trends, and other very valuable information that you will want to know.

OS 7.6 AND COUNTING

THE NEXT UPGRADE



APPLE'S NEW EXTENSIONS MANAGER groups System resources into packages. The packages allow you to see which components were installed together.

Just launch the installer, follow four steps, and go have some coffee and a bagel.

Let's dispense with all the tired music metaphors and get right to the point: Harmony has a name, and it is Mac OS 7.6. And it's going to be here soon. So is it a big deal? Should you care? It depends on what you want out of an operating system. If you want OpenDoc, improved reliability, easier installation, and better extensions management, Mac OS 7.6 is for you. If, however, your Mac is not 32-bit clean or has a processor slower than a 68030, you're out of luck—Mac OS 7.6 won't work on those machines. (The unsupported Macs include the original LC, Mac II, Mac IIx, IIcx, SE/30, and PowerBook 100). Mac OS 7.6 also won't work on PowerPC platform (aka CHRP) computers.

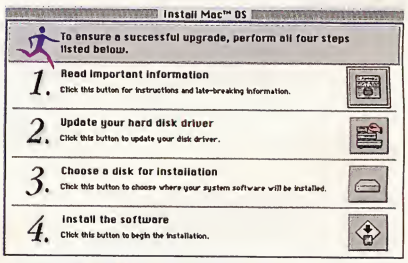
Mac OS 7.6 is the first step on the road to OS 8. As such, it doesn't do much. None of the buzzwords—not appearance manager, preemptive multitasking, or memory protection—made it into this release. What did make it in, however, is pretty spiffy.

Mac OS 7.6 automatically installs OpenDoc 1.1 as part of the installation process, which is a big plus for Live Object developers. Now they're assured that the technology they need is installed on each new Mac. Fear not, conservative adopters of new technology! Because OpenDoc is dynamically loaded (unlike Extensions), it doesn't take one whit of System resources (other than a little hard disk space) until it's needed. If you don't work with OpenDoc, you won't waste RAM or open yourself to new problems just by having OpenDoc installed. And it will be there for you if you need it. (Like a good neighbor...)

Mac OS 7.6 is supposed to be stable, taking all of rock-solid System 7.5.5's bug fixes and adding some new ones to keep your Mac perking along. It also includes System 7.5.5's improved Virtual Memory, improved file manager cache, and PowerPC resource manager to give your Mac a little performance boost.

Mac OS 7.6 also includes a one-stop shopping approach to installation. It organizes all vital information into one Read Me file, allows you to update hard disk drivers, runs Disk First Aid, and then allows you to install Mac OS 7.6 and any other extras (such as Cyberdog or QuickDraw GX) all in the same program. Just launch the installer, follow the four steps, and go have some coffee and a bagel. Your new software will be installed when you get back.

An improved Extensions Manager (version 4.0) will give Casady & Greene's Conflict Catcher some competition. It can organize extensions by "package" (that is, it groups extensions by the program that installed them) and allows you to turn on and off all extensions belonging to a particular program. This little ability is useful if you want to see what owns that Text Encoding Converter extension.



INSTALLING MAC OS 7.6 is as easy as 1, 2, 3, 4 with Apple's new installer.

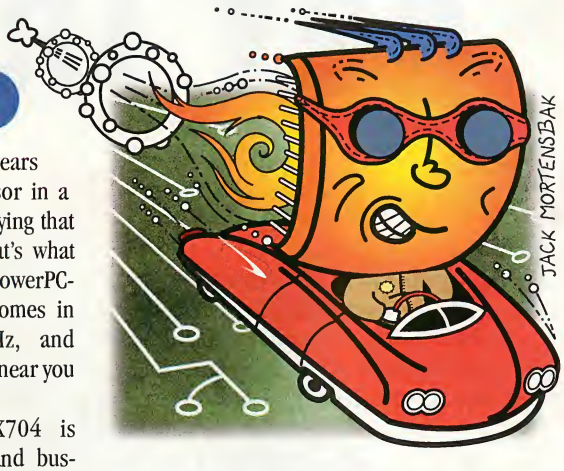
Mac OS 7.6 also lists the following among its bonuses: improved desktop printers and printing dialog boxes, PowerPC-native LaserWriter 8.4 software, new DataViz MacLinkPlus translators, enhanced PC Exchange for Windows 95, PlainTalk 1.5, OT/PPP 1.0, and multiprocessor support. Mac OS 7.6 is a System software release (as opposed to an update, as was System 7.5.5), which means it's going to cost money. How much, Apple hasn't said. —*DR*

Free Stuff

They say the best things in life are free. These cool, static-cling decals of the Apple logo are no exception. Stick one on your car and show the world your true colors. Get your hands on packs of five simply by dialing up StartingLine at 800-373-0877 and asking for part L01970A. Place orders via e-mail at <s.line.order@apple-link.apple.com>. —*NE*

SMOKIN'

AND SCREAMING FAST



Remember, oh, three, four years ago, when a 25MHz processor in a Mac seemed fast? Try multiplying that by 20 and stand back, mister. That's what Exponential did with its new X704 PowerPC-compatible chip. This screamer comes in three speeds—466MHz, 500MHz, and 533MHz—and it's coming to a Mac near you sometime in the next six months.

Exponential says that the X704 is completely PowerPC instruction- and bus-compatible, which means this chip can be put in Macs (with just a few tweaks to the power supply's voltage level and a big fan) and will run the Mac OS and Mac applications just like a regular PowerPC chip—only faster. No special system needed. Exponential licensed the PowerPC architecture from IBM in early 1996, and the company has been working closely with Apple.

To help bust bus bottlenecks, the X704 has two different kinds of cache on the chip that make sure the processor always has something to chew on. The first is a pair of 2K caches, one for instructions and one for data; the second is a 32K unified cache. The chip can take advantage of Level 2 cache like today's PowerPC chips.

Although Exponential has made Macintosh its number-one priority, other technologies will be able to blaze alongside the Mac OS. Windows NT should be able to run on the X704 as it does on other PowerPC chips, and Exponential says that PPCP computers should work fine with the chip as well. The company has also been in talks with Be, Inc., so don't be surprised to see the Be OS humming happily along at 500MHz.

All this speed won't come cheap. The chips are expected to sell for about $1,000 each, compared with $520 for a 200MHz Motorola 604e. Mac systems running the X704 are expected to ship by July. Imagine showing off a multiprocessor Mac running four 533MHz X704 processors to your Pentium Pro friends who top out at 200MHz. Won't they be impressed? —*DR*

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CLEAN UP THE KENNEL TO WIN ALADDIN'S SPRING CLEANING

Yowza! These poor dogs have escaped the kennel and can't find their way home. Can you name the Macintosh mascots so we can return them to their owners? Of course, with all those dogs cooped up in one place, you'll need a copy of Aladdin Systems' Spring Cleaning to clean up the mess. For your chance to win, enter on our Web site, or snail mail your entry to Mixed-up Mascot, MacAddict, 150 North Hill Drive, Brisbane, CA 94005. We will pick a winner at random from correct entries received by February 15, 1997.

1. Freelance (MVP Solutions' Retrieve It!)
2. Webster, your Web Buddy (DataViz)
3. Cyberdog (Apple)
4. Clarus (Apple Developer Tech Support)
5. Ling Ling (Bungie)
6. Sammy (Cheryl England)

a.

b.

c.

d.

e.

f.

CLONES OF CLONES

It's enough to drive a person positively batty trying to keep up with the new Mac OS-compatible computer makers. PowerTools, a Texas-based company that has been manufacturing PowerPC accelerator boards for more than a year, reached an agreement with Motorola to sublicense the Mac OS and purchase Tanzania motherboards (co-developed by Motorola and Apple) to build its own Mac compatibles. The new crop of Macs—titled the Infiniti series—will be available in two varieties: a build-your-own box and a fully configured box.

These replicants last longer than six years.

The three build-your-own-box Infiniti clones will include a tower case, the motherboard, and a floppy disk drive. Similar to the build-your-own scheme from APS, PowerTools will provide boxes *without* a hard drive or any RAM installed, so they're ideal for anyone who already has these components or who can get them cheaply. The four unconfigured clones are pretty reasonable: a 160MHz 603e-based Infiniti at $899, a 200MHz 603e-based Infiniti at $1,099, a 160MHz 604e-based Infiniti at $1,499, and a 200MHz 604e-based Infiniti at $1,499.

PowerTools will also sell three Infiniti bundles, more familiar to traditional Mac buyers. The Smart Bundle, for $1,399, features a 160MHz 603e, 16MB of RAM, a 1.3GB hard drive, and 2MB of VRAM. The $2,449 Pro Bundle features a 200MHz 604e, 24MB of RAM, a 2.5GB hard drive, 512K of L2 cache, and 2MB of VRAM. The Elite Bundle features a 200MHz 604e, 32MB RAM, 2.5 GB hard drive, 512K of Level 2 cache, Yamaha external speakers, and a 33.6Kbps internal modem.

All of PowerTools' bundles include an 8X CD-ROM, a keyboard, and a mouse, and all come in a minitower base. They also feature four 3½-inch and three 5¼-inch drive bays, three DIMM slots, five PCI slots, VRAM upgradable to 4MB, an SVGA monitor port (sorry, Macintosh monitor owners; you'll have to buy an adapter), an ADB port, a PS/2 port, and the ability to upgrade to multiple processors. The Infiniti line also includes a one-year warranty, an optional extended warranty, and a free upgrade to Mac OS 7.6.

IT HAD TO HAPPEN

PowerTools expected to start shipping units in mid- to late December 1996, with bulk production starting in early 1997. Call PowerTools at 800-891-4307 or go to <http://www.pwrtools.com>. —*DR*

NEW FOR THE MAC

ACROBAT 3.0

(Adobe; 408-536-6000; http://www.adobe.com; $295 (srp), $79 upgrade from Acrobat, $59 from Acrobat Pro; scheduled to ship mid-November 1996)

One of the original digital document programs has added a slew of new (mostly Internet-related) features, including forms (complete with pop-up lists and radio buttons), the ability to embed PDF files in an HTML page, and dynamic controls that can link to movies. Acrobat also includes progressive rendering and page-at-a-time downloading to help speed up Internet-related PDF files.

ANARCHIE 2.0

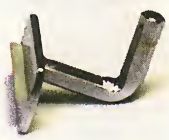
(Stairways Software; (no phone number available); http://www.stairways.com; $10 (shareware); scheduled to ship mid-November 1996)

Anarchie, a Macintosh FTP client, has had its first revision. Additions include the ability to upload and download folders, a new search mechanism (for those hard-to-find files over the Internet), interface improvements, an updated Anarchie Guide, and a Tips feature to help you get the most out of your FTP time.

get info

Hoo-jit Think It Was?

We thought the "Identify the Hoojit" contest in our November 1996 issue (p27) was sure to be a stumper. We were pleasantly surprised by the number of Mac addicts who knew the gadget's raison d'être. Of course, there were also a number of you who had no clue (despite the horrendous pun in the contest rules).



In keeping with the MacAddict tradition of rewarding ignorance if offset by creativity, we give space to the following amusing and bizarre answers: Stuart Ward called the hoojit a chunk of metal with paint. Well, so is an automobile. Jeff Vincent was one of several people who decided the hoojit was a monitor squeegee—don't try that at home, kids.

Readers who resorted to Nikki's clue on The Disc generally did not get far. The key was the tool she used to open her soda can—a Torx screwdriver. On older, all-in-one Macs such as the Plus or SE, Apple used special six-sided screws to hold the Mac together. This design was intended to prevent the more curious among us from too easily getting our heads blown off by the built-in monitor's capacitor. The Torx screwdriver Nikki used to open her soda fits into those special screws. After removing the screws, you use the hoojit to spread apart the case. With a Torx screwdriver and the hoojit, you can crack the case of any classic Mac.

More than just a chunk of metal...

Several readers gave us low-tech solutions if you don't have the hoojit. Tom Vermilion uses a karate chop method, in which the victim Mac is set face down on a bench after the case screws are removed and is given a mighty chop on both sides of the case. John Christie prefers a couple of well-placed sharp raps, which make him feel like the Fonz. Greg Thomy uses the mysterious Lucille, who has the 'most natural, long, strong fingernails.'

NOVEMBER'S MYSTERY REVEALED

Kee Nethery—who identified the hoojit—also guessed that it was included with the Micah internal hard drive for the Mac Plus. Micah might have included one, but sorry, Kee, this particular hoojit was included in a 32-piece Curtis computer toolkit. Along with a soldering iron, the toolkit also included a spring claw useful for removing the locator implanted in your brain by aliens.

Peter Wright was the lucky winner drawn from the pool of correct entries. Peter will be adding an 8MB DIMM to his Power Mac 8500, courtesy of Newer Technology (a company with a sense of humor, we might add). Find the list of runners-up on our Web site. —*KT*

WHAT A CHARACTER

SPEAK IT, DON'T TYPE IT

So what do you do when your language has more than 6,000 characters and you want to write a letter? Design a really big keyboard and buy futures in key switches? Well, you could, but if the language you want to enter into your Mac is Chinese, you can drop $165 on Apple's Advanced Chinese Input Suite and be set.

Apple continues to improve its speech-recognition offerings.

This new package consists of four components: the Chinese Dictation Kit 1.5, the Chinese Handwriting Kit 1.0, the Chinese Text-To-Speech 1.0.2, and the Apple Dictation Microphone. After a few weeks of practice with the Chinese Dictation Kit, Mandarin speakers can enter up to 80 characters per minute—just by speaking. The Chinese Handwriting Kit 1.0 allows users to enter either simplified or traditional Chinese characters using a Mac-compatible graphics tablet, or even a mouse. The input suite also uses Text-to-Speech so users can have their Macs read selected Chinese text back to them.

Meanwhile, Apple continues to improve its speech-recognition offering for Western Mac users with the PlainTalk 1.5 package. English speech recognition now works on every PowerPC-based Mac—including previously unsupported PowerBooks and Performas—with a 16-bit microphone and System 7.5 or later. Take advantage of the new Talking Alerts option, and the voice of your choice will enunciate the contents of alert messages. Imagine, if you will, the sweet sound of Zarvox intoning "Printer needs attention." An upgraded Speakable Items utility and a passel of speech-recognition bug fixes and reliability improvements round out the package. It's available free from <http://www.speech.apple.com/ptk>. —*DR and MS*

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Edit & browse HTML pages on your hard disk or network.

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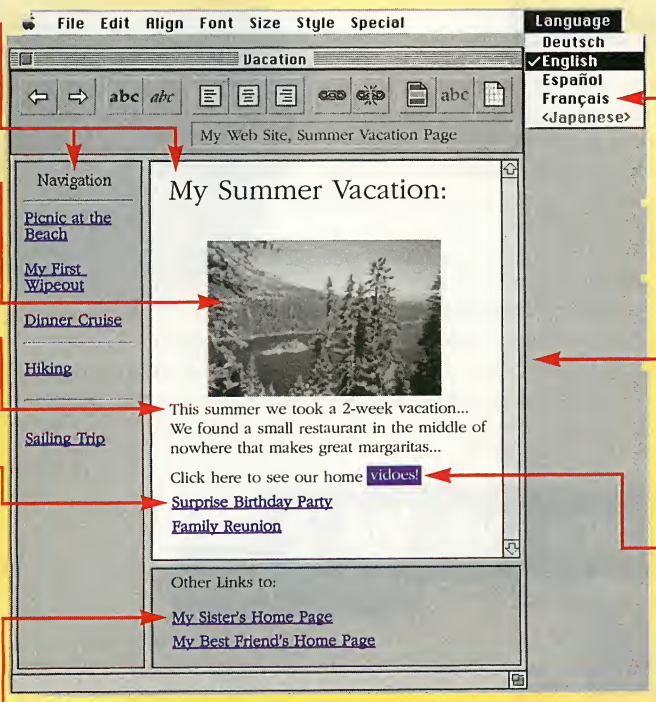
Make a link by dragging & dropping a file icon.



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cravings

Not your everyday releases—outta-sight play, work, and fun stuff—six of them!

Wild Planet Toys

Wild Planet

IN THE TRUE MAC SPIRIT.

What Mac would be complete without its own complement of very cool toys? Although not specifically meant for the Mac, these diversions are so much in the spirit of using a Mac that we had to include them. Being a Mac fanatic is often an adventurous pursuit in these days of Windows and Intel, but you can prepare for survival by equipping yourself with Wild Planet Toys. Wild Planet has seen fit to create the Megascope microscope and telescope, the Signal Glove secret code communicator, the Supersonic Ear long-distance microphone, the Trek Pack utility belt, and the Beast Blaster foam creature glider. For engineers on a program bug search-and-destroy mission, Wild Planet offers Bugscapes mini bug houses and the Bug Catcher, which lets you catch bugs without touching them (especially nasty in C++). To get into the spirit of adventure, call 800-247-6570.

You Don't Know Jack, Vol. 2

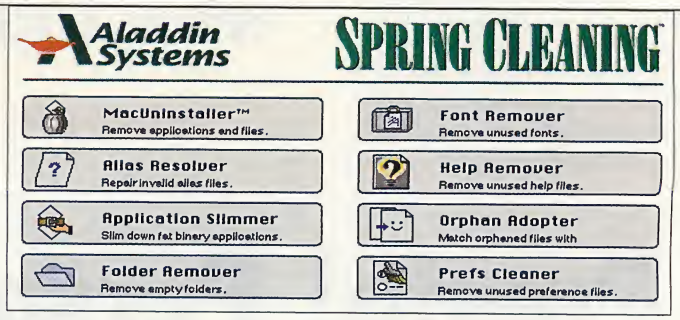
Berkeley Systems

PUT ALEX TREBEC TO SHAME.

So you think you know something, huh? Think you're smart. Yeah, reeeal smart. Bet you shout out answers while watching "Jeopardy." When was the last time someone was willing to play Trivial Pursuit with you? The folks at Berkeley Systems know your kind, and they'll play with you. They're betting that you love to field clever questions, make collect calls to celebrities such as Tim Allen, Nell Carter, and Erik Estrada (don't forget to ask about his partner), and take mild verbal abuse. If this is you, fork over $40 for You Don't Know Jack Volume 2, which features the full force of Jellyvision's wit. If you played the original, you know the humor; if not, you'll find out that maybe you don't know everything about everything. For a little intellectual humbling, call 510-540-5535, or surf over to <http://www.berksys.com>—if you can figure out a Web browser, ya simp.

Spring Cleaning

Aladdin Systems

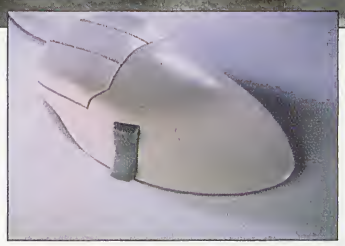


CLEAN THE DUST OUT OF THAT DRIVE.

What a mess. There's that letter from city hall on the coffee table among old newspapers, laundry, and outdated phone books, and you stare at it, knowing that inside is a request that you to haul off all those cars in your yard. If you ignore it, maybe it'll go away. Aladdin Systems can't help you with that (although it may be able to give you the number of a good lawyer), but it can help you clear the digital equivalent off of your hard drive. Spring Cleaning (formerly LaundroMac) is an uninstaller that also removes duplicate files, unused fonts, and orphaned help files, and puts a real shine on the ol' Preferences folder by getting rid of those files that you don't need. Spring Cleaning also finds and reattaches orphaned aliases and trims fat applications of their redundant code. Isn't it worth the measly $49.95 introductory price to have a bright, shiny hard drive? If you agree, contact Alladin at 408-761-6200, or point your browser to <http://www.aladdinsys.com>. Please. Even the mayor will be happy.

Contour Mouse/Stingray 4.0

Contour Design/CoStar



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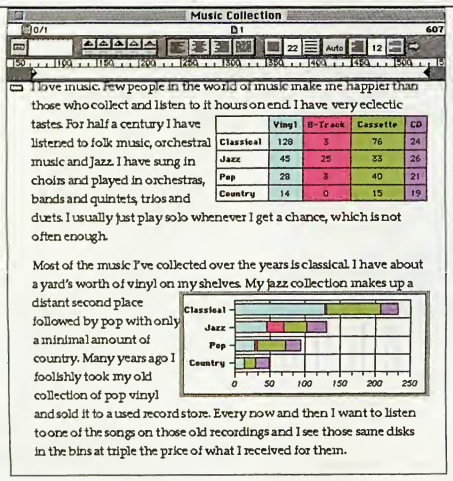
Contour Design cares. That's why it created the Contour Mouse, the first mouse that comes in many sizes—large, medium, and small for both left- and right-handed mousers. The mice are ergonomically molded to fit the hand and come with a thumb rest. Three programmable buttons help you get the most out of your mouse with the least strain. For only $59.95 and a phone call to 603-893-4556, or a browse over to <http://www.contourdes.com>, you can have your very own. For those who like trackballs and have a fondness for the muscle car by the same name, CoStar (http://www.costar.com; 800-426-7827) presents the Stingray 4.0 trackball. The Stingray 4.0 features two programmable buttons, a virtual third button, application- and user-specific settings, and the ability to use the Stingray sideways or upside-down (not you, silly, the trackball). For only $59.95, it's available in Apple platinum or Stealth Black for those super-secret computing missions.



Nisus Writer 5.0

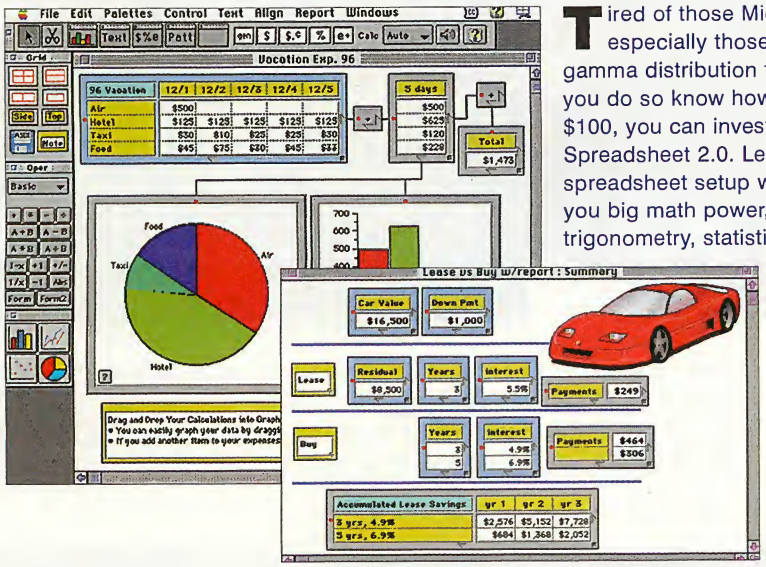
Nisus Software

On a fluke, we looked up the word "nisus" and found out that it means "effort" or "endeavor." It also means "a seasonal desire to mate," according to "Webster's." You, too, can amuse your friends and acquaintances (assuming you have any if you persist in this behavior) by looking up obscure word synonyms with Nisus Writer 5.0's thesaurus. Version 5.0 is jam-packed with some nifty other features, including AppleScript support, full drag and drop, command-clicking of URLs to open them, and QuickDraw GX support. Nisus Writer 5.0 is even an OpenDoc container, which means you can embed your favorite Live Objects in its documents. All this for only $257 direct from Nisus Software ($149 if you own another word processor, and $69.95 if you own any previous version of Nisus Writer). Contact Nisus at 800-281-0101 or go to <http://www.nisus-soft.com> so you can make your own list of fun-to-look-up words. And you'll know they're spelled correctly.

ALMOST AS MUCH FUN AS "THE OXFORD ENGLISH DICTIONARY."

Let's Keep It Simple Spreadsheet 2.0

Casady & Greene



Tired of those Microsoft Excel snobs lording it over you at work, especially those who actually know how to use that obscure gamma distribution function? Here's your chance to show them that you do so know how to crunch data on a computer. For less than $100, you can invest in Casady & Greene's Let's Keep It Simple Spreadsheet 2.0. Let's K.I.S.S. takes the complexity out of spreadsheet setup while giving you big math power, including trigonometry, statistics, calculus, and logic functions. The program also includes date and time formatting, and it resizes views to make room for new elements on the fly. Once you've established the formulas, collapse them into operators so you don't have to see the gory mathematical details or fear erasing those hard-written formulas. The program even features a built-in calculator. Call 800-359-4920 or go to <http://www.casadyg.com> to rid yourself of =SUM(A7:A33) forever.

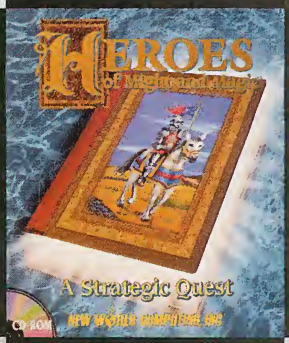
THE PROGRAM IS EASIER THAN THE NAME.

Pick your poison: Russia's premier helicopter, the Werewolf, or the U.S.'s 21st-century Comanche. Either way, you're a flying fool, with more realism packed into two CDs than a tower buzz at Baghdad Airport. Motion sickness bag not included. From NovaLogic.

MechWarrior 2 puts you in control of the BattleMech, the awesome 31st-century war machine. Customize one of 15 Mechs to fight in over 30 challenging missions against enemy Mechs. Ascend the ranks of your clan to become the ultimate MechWarrior. From Activision.

Here's a bunc

Heroes brings out the warlord in you—a fantasy/strategy game that puts you in command, recruiting heroes and their forces to battle up to three human or computer adversaries. What's at stake? Only the entire world, as you know it. From New World Computing.



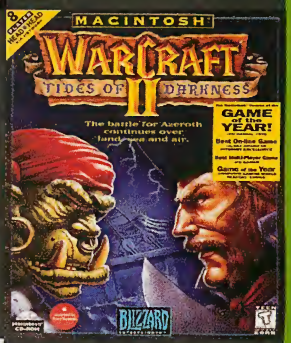
Gabriel Knight, the hero of the spine-tingling "Sins of the Father," scares the living pants off us once again as he solves this multiple mutilation murder tale, The Beast Within. You'll leave every light on in the house for a week after this one. From Sierra On-Line.

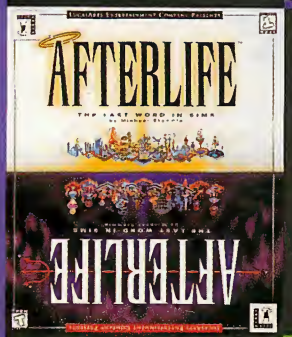
Never again feel the loss associated with finishing a game of Marathon. The third chapter brings it all full circle, and Bungie's own editing tools give you limitless power to create the adventures. We still recommend retina breaks every 30 hours or so. From Bungie.

Descent II's new 360° 3-D animation will keep you glued to the screen for hours as you battle an armada of crazed robots. You'll tap into a ton of cool, high-tech weaponry and all the wits and reflexes you can muster as you try to fight off the onslaught. From MacPlay.

Did you know that there's an actual strategy to going 220 mph? It's all laid out here, plus you can race to your heart's content with no fear of losing your license or melting a crankshaft. IndyCar is virtual decadence at its self-absorbed best. From Sierra On-Line.

WarCraft II, the best-selling PC game, now explodes on the Macintosh. Take command of either the ruthless Ores or the noble humans in your quest to rule the land of Azeroth. Make powerful new allies, battle terrifying new creatures, conquer new lands. From Blizzard Entertainment.





Become the omnipotent, godlike and somewhat goofy ruler of your own kingdom as you determine the final resting place of your "souls." Afterlife will have you laughing, or screaming, or possibly both as you try to figure out what to do with your new friends. From Lucas Arts.

Full Tilt! Pinball is as real as it gets. A truly realistic pinball experience on a computer. Accept the challenge of three mesmerizing pinball tables, each with its own photorealistic 3-D graphics, incredible sound effects and accurately modeled ball movement. From Maxis, Inc.

When it comes to cool games for the Mac,® the world is your virtual oyster. (And if you'd ever look up from your computer for a second, you'd know this.) So, while we're lucky enough to have your attention, know this: you can find great Mac software on the web, in pretty catalogs and lots of great places

©1996 Apple Computer, Inc. All rights reserved. Apple, the Apple logo, Mac, Macintosh and the Mac OS logo are registered trademarks of Apple Computer, Inc. All other prod

of cool games for the Mac. Even though research tells us you'll have a favorite and compulsively play it 46,658 times.

like Best Buy and CompUSA (understanding, of course, that leaving the house is unavoidable if you want to visit one of the stores). In fact, just short of beaming game code directly into your cerebral cortex via satellite, you can get your hands on the really good stuff almost any way you want. To begin your obsession with Mac software and to check out all these different ways to buy, get on the Internet and plant yourself in front of our web site at http://www.macsoftware.apple.com. Or, if you're into tradition, **call 800-500-4862**.

re trademarks or registered trademarks of their respective companies.

facing up to fonts

EVERYTHING THAT YOU COULD POSSIBLY EVER want to know about type

...and then some

by Ted Alspach

Download a bunch of these cool fonts off The Disc and learn how to tame them with the font management demos.

It's an obsession. You're sitting in a movie theater, riveted to the big screen as the film's opening credits flash through a spine-tingling sequence of exploding bombs, screaming tourists, and seductive villains. Suddenly, you sit straight forward, as if to get a better look, muttering, "I can't believe it!"

Your date turns to you, as enraptured with the on-screen action as you appear to be, and asks, "What? What is it?"

Disappointed and disgusted, you shake your head in disbelief. "They're reversing Bodoni. The serifs are practically nonexistent!"

Everyone down the line from professional graphic designers to page layout initiates can trace this strange font fixation back to the birth of the Macintosh, the first computer to ship with multiple fonts installed. Chicago, Geneva, Monaco, and New York: In 1984, these four typefaces instantly became as famous as the cities that inspired them. As the Mac quickly became the computing standard for graphic designers, this paltry collection of characters bloomed into a thriving industry that has since spawned thousands of typefaces, multiple font managers, design dilemmas, and a jargon all its own.

As confusing as it sounds, you don't need to be a graphics pro to keep the peace in all of your extended font families. Even if you don't know your x-height from a dingbat, we'll bring you up to speed on font terms, design issues, and management techniques in our three-part guide that will make storing and using your fonts a breeze.

Easy Installation

Fortunately, you don't need a Ph.D. in nuclear fusion engineering (i.e., rocket science) to install and remove fonts. Just do the following:

1. Quit all applications.
2. Install new fonts by dragging them onto your System Folder. Your Mac will automatically stick them in the Fonts folder, which is inside the System Folder.
3. Remove fonts by dragging them from the Fonts folder (inside the System Folder) to a location on your hard drive outside the System Folder.

sans serif

At the risk of stating the obvious, sans serif faces lack serifs. Sans serif type is often used for headlines and titles where you really want the words to stand out, or in very small type where serifs would just look out of place.

x-height

Aka: the body. The "standard" height of lowercase letters, such as "acemnorsuvwxz," measured from the baseline to the top of the letter.

counter

The white space inside roly-poly letters such as "opecd." Some people like to fill in these spaces with cutesy little pictures, like smiley faces.

cap height

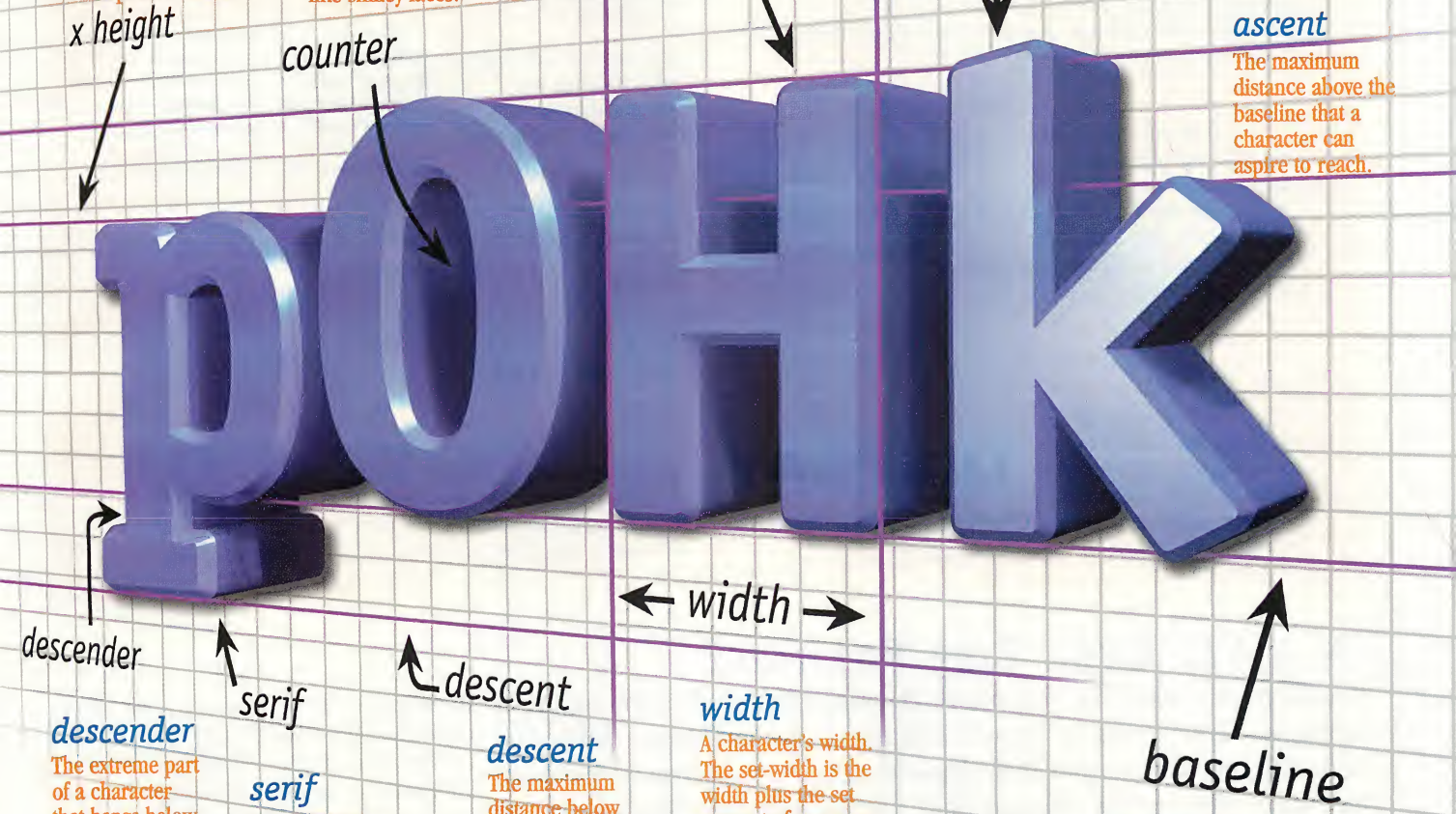
The height of a typeface's capital letters.

ascender

The tall portion of a character that stretches above the x-height.

ascent

The maximum distance above the baseline that a character can aspire to reach.



descender

The extreme part of a character that hangs below the baseline, seen usually in the lowercase letters "gjpqy."

serif

Teeny little lines, called counterstrokes or serifs, stick out of the ends of letterstrokes in a serif font. Serifs usually make longer passages of type easier to read, as they help to define the shape of words rather than of letters.

descent

The maximum distance below the baseline that a character can fall.

width

A character's width. The set-width is the width plus the set amount of space on the right side of the character that keeps it from bumping into other characters.

character

Every letter, number, symbol, and punctuation mark is a character in its own right.

baseline

The invisible line on which all fonts rest their lazy characters, morning, noon, and night.

Illustration by Olivier Wolfson

bASiCs

Learning the Lingo

Before you attempt to wrestle your fonts into submission, you should know exactly what sort of beast you're up against. You need to get to know your fonts. Spend time with them. Play with them. But first, find out what they like to be called with our illustrious illustrated naming device.

Typeface All of the letters, numbers, symbols, and punctuation marks of a particular design. A typeface can be made up of a variety of styles, or fonts. In these modern days, many people often use the terms "typeface" and "font" interchangeably. Although this usage is technically incorrect, it has become so common that everyone except diehard typography snobs deem it acceptable.

Garamond Book Condensed
COPPERPLATE
Palatino
Rotis Semi-Serif

Each font is unique.

Font All of the letters, numbers, symbols, and punctuation marks of one size of one style of one typeface. Specifically, Officina Serif book is a font, Officina Serif book italic is another font, and Officina Serif bold is yet another font. You get the idea.

Officina Serif book
Officina Serif book italic
Officina Serif bold
Officina Serif bold italic

Four faces: so different!

Display fonts EXTRA! EXTRA! These statuesque fonts, such as Swiss Black Extended, are sized at 14 points or bigger and used mostly for headlines.

DISPLAY

Catch your eye? This is display type.

Decorative fonts Too flashy for everyday use, decorative fonts such as Amelia are used sparingly to create a mood or evoke a predicted response. And they look great in logos!

Decorative

When looks are all that matter.

Text fonts Text fonts, such as Caslon and Garamond make long passages of text easy to read.

Caslon is a decent enough body font to have survived hundreds of years. You can't really go wrong with Caslon, but just the same, we really adore Garamond.

Simple text makes reading easy.

Point A point, which is 1/72 of an inch, is used to measure type size. Twelve-point type is fine for reading, 14-point and larger looks good in display type, and 6-point type makes up all that fine print at the bottom of advertisements that no one wants you to see.

10 point
14 point
18 point

Get the point size right.

Dingbats Tiny, decorative pictures such as diamonds, hearts, and stars that are not to be confused with the deliciously flavored marshmallows in Lucky Charms. Or, anyone who doesn't read MacAddict.

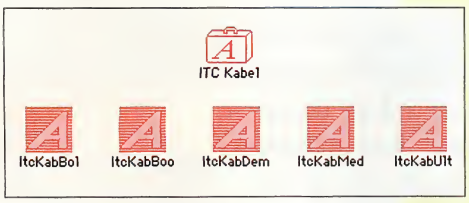
Dingbat silliness.

In a Fix Over File Formats?

If you've never worked with fonts before, choosing a file format can be downright confusing. Several rotating liaisons between Adobe and Apple, Apple and Microsoft, and Microsoft and Adobe have borne a slew of different yet functional file formats. How are they different? Which one works the best? We'll tell you how each font technology works and then give you tips on choosing the appropriate one for you.

Bitmapped fonts These are the classic, originally-shipped-with-the-first-Mac fonts, such as Geneva and Chicago. Bitmapped characters are created in your Mac and displayed on your screen in pixels. The same pixels you see on *the* screen are the ones in the font itself, leading them to often be referred to as "screen fonts." These fonts were printed with the Apple ImageWriter, which offered the same resolution as the Mac screen: 72 dots per inch. Back then, you needed to have a screen font for each point size that you wanted to print, otherwise your Mac would just pull, push, and maneuver the size it had, creating some odd-looking characters.

PostScript Type 1: In 1985, John Warnock and Chuck Geshke of Adobe Systems created a computer language just for printers, the PostScript page description language, which would revolutionize the font industry. So-called PostScript fonts, which use bitmap data to display your font on-screen, also include extra information describing the characters' outlines that is sent directly to a PostScript printer.



PostScript printers are equipped with built-in processors that interpret this outline information and convert it mathematically (called "rasterizing") into dots, which the printer needs to reproduce the font. This process results in fonts that you can scale to any point size and print with minimal distortion.

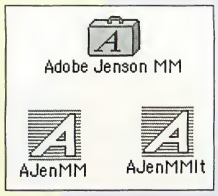
You'll find a PostScript font's bitmap and outline information divided into separate files called the screen font and the printer font. The screen font, which is stored in a suitcase icon in your Fonts folder in the System Folder, needs to be installed before your font will appear in the Fonts menu or on-screen. The printer font, however, is a different icon, which is usually stored in the same folder as your screen font. Keeping track of printer fonts can be difficult, because each icon looks different depending on which vendor created it. It's smart to keep tabs on both the screen font and the printer font because you must have both installed for a PostScript font to print.

Although PostScript fonts looked terrific in print, their on-screen counterparts still looked rough around the edges until Adobe Type Manager (ATM) appeared on the scene in 1989. ATM works like a PostScript printer by using math formulas to rasterize the outline information of your chosen screen font into the dots needed for a smooth on-screen display. ATM also lets you print PostScript fonts to non-PostScript printers such as the old dot matrix ImageWriters and most modern inkjets.

TrueType: In 1990, Apple finally realized that paying license fees to Adobe for the PostScript fonts that they were giving away with their own system software was silly. Apple teamed up with Microsoft to create fonts that didn't need PostScript but would work just as well and look just as good. These fonts entered the Macintosh world as TrueType and still ship with Apple System software. Outline-based and contained all in one file, TrueType works in much the same manner as ATM to create clean fonts on-screen and off. TrueType fonts work on both Macintosh and Windows systems.

Multiple Masters: These are PostScript Type 1 fonts from Adobe with a twist: Each font comes with at least two extremes of one type attribute. For instance, Jenson comes with a very light version and a very heavy version. Penumbra comes with several versions: sans serif, serif, roman, and italic. Using special utilities, you create the exact variation of the font you want by basing it on these multiple masters.

OpenType: Coming soon to a computer near you. Developed jointly by—switch!—Adobe and Microsoft, this format (slated to appear in 1997) will contain the best features of PostScript and TrueType, and even some of Adobe's Multiple Master technology. In addition, built-in compression technology will make the fonts more Web-ready (gee, what a surprise). They'll also be cross-platform compatible.



QuickDraw GX: Apple, ever discontent with existing technology, invested lots of time and cash on QuickDraw GX, an "update" to the QuickDraw software that sends images to your monitor (and non-PostScript printers). To further enhance GX, Apple created a font technology with all sorts of built-in design capabilities that allowed for larger character sets and better-looking on-screen display. GX fonts are capable of 65,000 characters per font, context-sensitive glyphs (different versions of characters that are used based on their position within a word or paragraph to make the type look best), optical alignment (so that letters look like they line up better), and varying styles (so you can swap among multiple character widths, slants, serif sizes, and even weights). To date, GX has not been accepted because it slows your Mac to a crawl, no major applications support it, and it isn't cross-platform. But be warned: You will see it again in a later system, in a new and improved form.

TrueType Truism

Tips

All TrueType icons come branded with the letter "A," but you'll notice that some TrueType fonts are marked with three "A"s and others with only one. The file with the icon sporting the triple "A" is the only one you need to display and print your TrueType font at all sizes. The TrueType icons marked with a single "A" and labeled with a point size are bitmapped, one-size-only screen fonts—usually the sizes you'll use most often. You can choose to install them for a very slight speed increase on-screen or to trash them and free up valuable memory.

Decisions, Decisions

How do you decide which kind of font to use? If you're shooting for a certain look and are willing to fuss around with your font to get it just right, Multiple Master fonts are a dream come true. PostScript or TrueType, however, are used for most practical purposes.

Although choosing a font format is most often a matter of personal preference, you should be aware of each format's pluses and minuses before settling on one. PostScript fonts, with their dual information files, can create annoying printing problems if you don't have both on-screen and printer files installed. TrueType fonts, though contained in one file and much easier to manage, take up more space on your hard disk than PostScript fonts and take longer to print. They also tend to randomly conflict with PostScript printers, causing unpredictable printing problems that range from time delays to total crashes. Graphic designers who send their work to a service bureau for output on high-end imagesetters (which are always PostScript machines) should be wary of these potential printing dilemmas.

If you're still waffling over formats, here are some guidelines to help you decide:

Standardize If Possible. A Fonts folder stuffed with a mix of TrueType, PostScript, and GX fonts is a disaster waiting to happen. This is very bad. Stick to one format and you'll minimize your risk of unwanted printing surprises.

Give In to Peer Pressure. Does your boss worship at the altar of Adobe? Stick with PostScript. Your spouse refuses to have a separate file for screen fonts? Stock up on TrueType.

Save Money, Buy the Cheap Stuff. TrueType fonts tend to be less expensive (on average) than their PostScript counterparts.

dESiGN

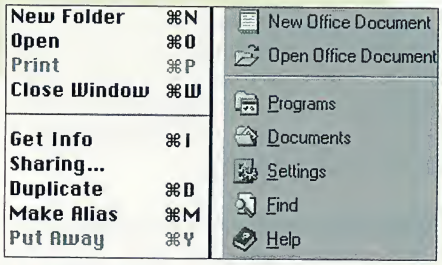
You can buy as many fonts as you'd like. You can use whichever ones you want in any document. The thing is, use the wrong combination of fonts, the wrong number of fonts, or inappropriate fonts in inappropriate places, and the design police will brutally take you down like Andy Sipowicz on a bender. Keep yourself out of trouble (and maybe even make a few new friends) by adhering to the following rules for using, avoiding, and buying fonts. If you don't, we will know, and we will find you. We will.

Ten Type Commandments

1. Reversed Type Is Difficult to Read. Anyone who has ever tried to read six pages of white text on a black background in a really cool Mac magazine has probably noticed that it takes much longer to read than the other sections of the magazine. If you haven't already noticed, we've redesigned our Disc Pages section. That's why.

Reversal of Type

2. Macintosh System Fonts Are Prettier Than Windows System Fonts. Look at a Windows screen. Control your urge to giggle. Look at a Macintosh screen. "Ooh" and "ahh" where appropriate. The eye-pleasing combo of Geneva and Chicago beats out MS Sans Serif every day of the week.



3. Mixing Upper and Lowercase Letters Makes Words Easier to Read. ALL UPPERCASE GETS ATTENTION ONLY BECAUSE YOU HAVE TO STARE AT IT SO LONG TO FIGURE OUT WHAT IT SAYS.

4. A Little Tracking Goes a Long Way. Tracking, the adjustment of the spacing between letters, can make words look even more like words. Huh? Well, properly tracked letters enhance and solidify the shapes of words, which is key to reading and comprehension.

On Track
On Track

5. Old-style Numerals Rock. Numbers that dip below the baseline occasionally can make text look much better than standard monospaced numbers. That's because old-style numerals look like the other text they're wedged into.

#A6987560

6. Serif Type Looks Better in Print; Sans Serif Works Better On-screen. The smaller and less detailed the type, the more likely that serifs will (a) get lost or (b) appear like gargantuan appendices. Either option results in type that is less readable than a standard sans serif face on-screen (where you have less detail due to a fixed number of pixels).

7. Really Funky Fonts Draw Attention to the Font, Not the Words. Yeah, it's great that you own a font that turns every letter into a different infectious virus. But even when used as a heading for a story

Attention!

Our Top 10 Fonts

If we were stuck on a deserted island, with no Internet connection and no means of escape, and if we were so smart as to be able to power-up our Mac but so stupid as to choose to play with it instead of scavenging for food or building shelter, we would want these fonts to make really cool on-screen documents. So should you.

1. Meta. Developed by artist Eric Speakerman for use by the German Postal Service, this font is not only elegant and versatile but wide—Perfect for those long school reports that you need to stretch out.

2. Rotis Semi-Serif. If you're feeling indecisive but still want a font that looks good, Rotis Semi-Serif lets you have the best of both serif and sans serif worlds.

3. Lefty Casual. (Shareware) The handwriting fonts of the gods. It has boldface and Marker versions as well as the regular weight.

4. Monaco. The quintessential monospaced screen font. When you want each character in a paragraph to be equally spaced, regardless of its God-intended width, look to Monaco as the great equalizer.

5. Helvetica. Everyone has it, and it's great for minuscule point sizes on legal documents, in case you rear-end someone and need them to sign a waiver.

6. Geneva. It looks great on a PowerBook screen whether you're working at 9 or 12 points.

7. ✺❄❒❄∞✕✚✐ (Zapf Dingbats). Sometimes you *need* a little check mark. Or a heart. Or a pointing finger.

8. Σψμβολ (Symbol). The productive side of Zapf Dingbats. When you need to say "the sum of" without saying "the sum of."

9. Ransom Note. (Shareware) Invaluable for when you've just taken hostages and don't have a magazine and pair of scissors handy.

10. *Zapf Chancery.* The elegant, flowing curves work for bar mitzvah invitations, thank-you notes, and the occasional lewd love letter.

about infectious viruses, the font will overpower the title. Use these sparingly and as art elements.

8. Drop Caps Should Never Appear in Two Consecutive Paragraphs. Drop caps signify the beginning of something new. Nothing will draw a reader's eye to the next section faster than an upcoming drop cap (except maybe naked-lady fonts, but that's an entirely different article).

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9. Robin Williams' "The Mac Is Not a Typewriter" Is Required Reading. If you've never read this excellent tome, run out to your local one-stop book shop and pick up a copy, or call PeachPit Press at 800-283-9444. Then read Robin's follow-up, "Beyond the Mac Is Not a Typewriter." And then read Robin's "How to Boss Your Fonts Around." And then wear one of those cool hats and pretend to *be* Robin.

10. If You Use Too Many Fonts on a Single Page, Your Mac Will Explode. It's a little-known feature of System 7.5, so don't pick a different font for every word in a paragraph, or a different font for each heading. Don't say we didn't warn you...

Five Most Played-Out Fonts of 1996

Overused, tired, and unoriginal, these fonts have appeared in print more times than Bill Gates. Someone get an imagination, quick!

Tekton. Yeah, you're an architect. Hurl.

LITHOS. Suitable for Greek geeks only.

Template Gothic. Yes, it was great. Let it go.

Any Ragged Typewriter Font. Aunt Sylvia's Selectric seems high end compared with this stuff.

Times. Gee, you have four million fonts from which to choose...

Our Five Fave Font Vendors

The first few fonts were free (they came on your Mac). As with any good thing, you now have to pay to keep your font habit going. Where do you go? What font vendors will help you when you're jonesing for a new font like there's just no tomorrow?

One inexpensive choice is shareware. Shareware fonts are available in all sorts of places, from the MacAddict Disc to online services (such as America Online) to various Web and ftp sites. Most shareware fonts cost about $5 to $10 per font and are available in both TrueType and PostScript Type 1 formats. Beware of font-collection CDs that feature shareware fonts; the cost of the CD does *not* include the shareware fees for the fonts. As always with shareware, if you use the fonts, make sure you send in the required fee. These small amounts allow shareware developers to create such great stuff at such low prices.

If you choose to buy commercial fonts, you can order them from most mail-order houses or directly from the manufacturer. The following is a list (in no particular order), in our humble opinion, of some of the best font vendors of Macintosh typefaces.

1. Bitstream

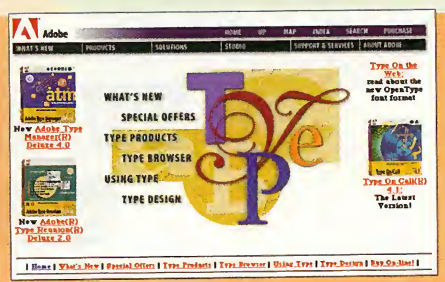
(800-237-3335, http://www.bitstream.com) The blue-collar, workingman's foundry. Less expensive than Adobe and almost as good.

2. Letraset

(800-343-8973, http://www.letraset.com) Support for the Mac is less than fantastic, but Letraset makes a bazillion cool display fonts you won't find elsewhere.

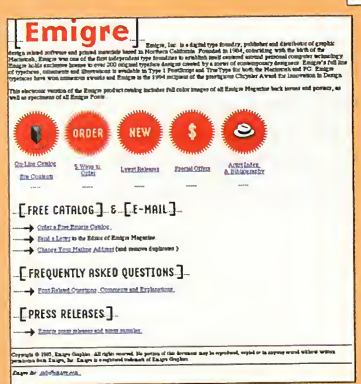
3. Adobe

(800-833-6687, http://www.adobe.com) King of PostScript. Lord of Fonts. All hail the great Adobe Originals.



4. Emigré

(800-944-9021, http://www.emigre.com) Founded in 1984, Emigré helped to spark the alternative design revolution with controversial fonts created by new, leading-edge designers. Here's your chance to be hip.



5. FontHaus

(800-942-9110, http://www.members.aol.com/fonthaus/index.html) Lots of unusual stuff. And we mean that as a compliment.

Fonts for All Ages

As far as fashion history is concerned, the '70s will remain forever trapped in bell-bottom hip-huggers, the '50s in poodle skirts, and the '80s in leg warmers and ripped sweatshirts. Much like these tacky clothes, certain typefaces serve to remind us of times past. So if you want to give your flyer, invitation, or logo a notoriously dated look, you might take inspiration from our typeface timeline where we've gathered together a sampling of historically nostalgic fonts.

Hundreds of Years Ago

Hundreds of Years Ago.

Type evoking old styles of the 1500s, 1600s, and 1700s almost always falls into the category of "Old English." The swashes, swirls, and drastic light vs. heavy strokes create a feeling of classic old-style European culture. The Old English style is often used on official documents and wedding invitations. A thick favorite from this set is Fette Fraktur, which seems destined to appear on German hymnal covers.

Turn of the Century

Turn of the Century.

Woodcut mania. Fonts that look like they belong on a "Wanted" poster in the Old West. Several fonts reminiscent of this time period have a tendency to showcase overweight, showy serifs. Popular examples include Rosewood (above) and Adobe's Woodtype fonts, featuring such classics as Ponderosa, Poplar, and Willow.

Art Deco

1930s Art Deco.

Anytime you see art deco fonts, the prewar era suddenly springs to mind. The font style (as well as the hideous decorating motifs) was en vogue again in the late '80s but quickly faded away, leaving only a few Nagel-engraved mirrors in its wake.

The Crazy '80s

The Early '80s.

In the days just prior to the desktop publishing boom (before 1988), display typefaces were undergoing changes of weird proportions. Some of the most unusual, bizarre, and odd typefaces were created during this time. Letraset led the charge, supplying design studios with the widest range of fonts imaginable (until the '90s, at least).

Why Everyone Hates the '70s.

Two decades ago, no one really thought that wide ties and bell-bottoms would be scoffed at and ridiculed for the next century. It was a dark, dark time for fashion and an equally dark time for fonts. From the perky curves of Souvenir to the fatter, more annoying curves of Cooper Black, popular fonts were bubbly and overly friendly to the point of making most people violently ill.

The '60s: Hippy-induced Rock Poster Fonts.

During the late '60s, designers got groovy on fonts by bending, molding, and twisting them to create mellow, peace-loving typefaces that adorned posters for such mellow, peace-loving bans as The Grateful Dead; Peter, Paul and Mary; and The Jimi Hendrix Experience. These trippy typefaces, such as Arnold Boecklin (above), helped usher in the '70s, when the sex was even more casual, people weren't just saying no to drugs, and hippies were allowed to live in other areas of the nation besides small college campuses and San Francisco's Haight-Ashbury district.

The Desktop Publishing Revulsion

The Late '80s: The Desktop Publishing Revulsion.

If Macs are responsible for anything bad (and because they're responsible for Windows in a roundabout way, this is an arguable point), they are definitely to blame for one of the ugliest disorders ever to appear in the Western Hemisphere, and which is still largely incurable: Multiple Font Usage Syndrome. This uncontrollable urge to stuff as many fonts, styles, point sizes, angles, and effects as a stock LaserWriter will print onto one page has been largely ignored by research centers, and it remains a problem even today.

the '90s

The Anti-'90s.

As in digital art, the very cool thing to do with your $3,000 Mac is to make your work look as though it was created with anything but a computer. The emergence of several "typewriter" fonts that include all sorts of realistic effects, such as missing characters, angled letters, and ink splotches, have appeared everywhere. In addition, handwritten fonts have become the other rage, kind of a wacky throwback to the time when people used things such as pen and lined paper to communicate.

mAnaGeMenT

Controlling Chaos

You have 10 different versions of Tekton floating around your Fonts folder. You get a migraine trying to figure out why Optima won't show up in your File menu. To top it all off, you've had so many problems with corrupted fonts, you feel like you're running a detention center for wayward typefaces. Face it, you are in the bell jar. Take control of your fonts with the appropriate utilities (we'll show you how to use 'em), and check out our remedies for your worst font aches and pains.

Middle Management

The Fonts folder. If the mere mention of that folder makes your blood curdle, and if the darn thing takes about six weeks to open on your 240MHz 603 system, and if you have no idea what's in there (even the sight of a JimmyHoffa font doesn't raise an eyebrow), then you might start thinking about ways to make sense of your mess.

Fortunately, a ton of utilities exist to help frazzled font enthusiasts clean out their Fonts folders and keep their fonts organized. If you're perfectly satisfied using the fonts that came shipped with your Mac and haven't bought any extras,

(See Management next page)

IF YOUR FONTS are overrunning your Mac like a crop of tough weeds, pull them into order with one of these font managers.

mANaGeMENT

then you really don't need any of these nifty utilities—the Fonts folder will handle your fonts just fine. But if you find yourself gushing over a new favorite typeface every day, you've probably racked up enough fonts in your Fonts folder to warrant a little outside help. Also, you'll enjoy the ease with which a font manager enables a font (depending on the application you're using), without forcing you to quit all running applications. Cool.

Regardless of whether you're using Symantec's Suitcase, Adobe's ATM Deluxe, or Alsoft's MasterJuggler to manage your fonts, the following general guidelines to working with your fonts will make managing them less of a chore.

1. Organize your fonts into folders that represent how you use them. For instance, you might keep a folder of fonts that you use exclusively for your personal letters and one for those that you use when you're keeping things strictly business.

2. Don't force all your fonts onto your main (startup) hard drive. The beauty of font management software is that the fonts can exist anywhere, such as on an Iomega Zip drive, a server, or another hard drive.

3. Keep as few fonts as possible open. The fewer fonts you have installed, the faster most applications will launch, and the faster the Font menu will appear. This is much easier to achieve using font management software than by dragging things in and out of the Fonts folder.

4. Starting up with extensions turned off can be problematic. Font management software exists as extensions, and not having them installed prevents font sets from being loaded. This can cause all sorts of problems, which you can avoid by using Apple's Extensions Manager to turn off everything *but* your font management software. As an extra safeguard, keep essential fonts such as Chicago, Monaco, Geneva, and Symbol in your System Folder at all times.

5. Some applications get confused when fonts are opened or closed via font management software while applications are running. It's a good idea to quit any open applications that use fonts before closing or opening different font sets.

REASON #26 WHY MACS ARE BETTER THAN PCS: FONTS

PCs require you to install fonts via an Install Fonts command; there is no simple drag and drop (even though there is a font directory). Probably more important, if you want to see a sample of the font, Windows still shows the classic (and boring) phrase "the quick brown fox jumps over the lazy dog."

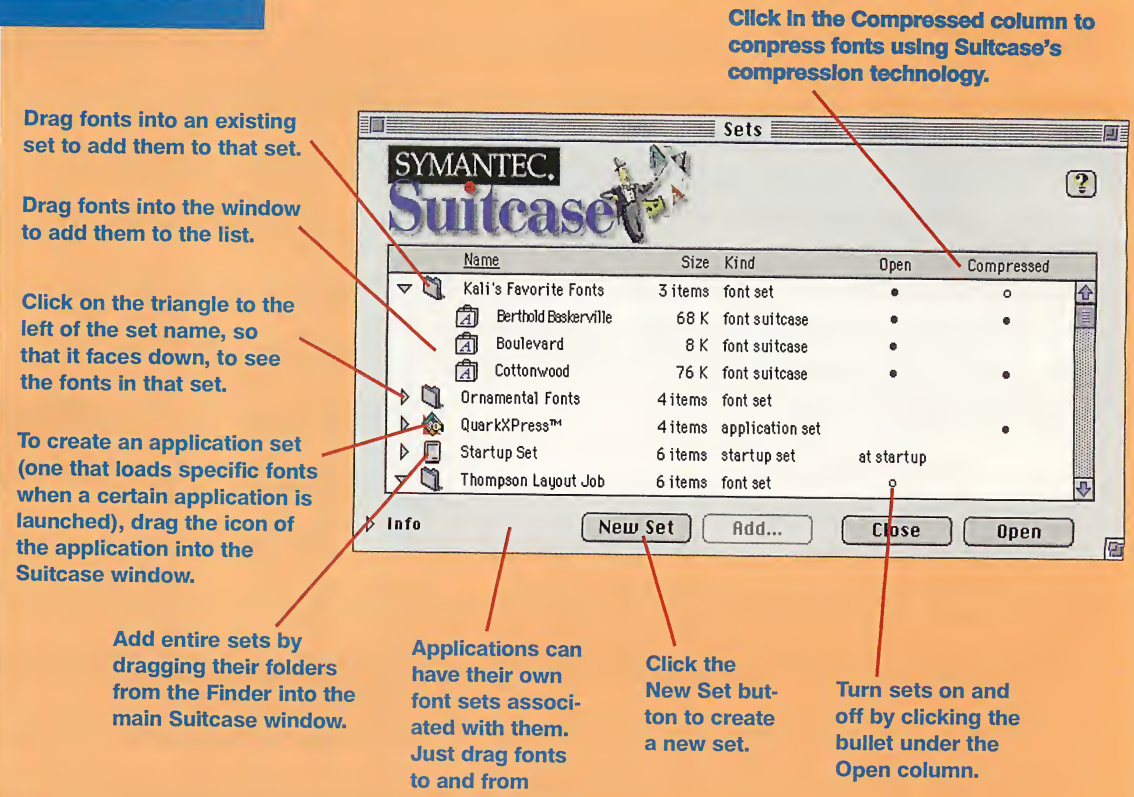
Although annoyingly stereotypical (ask any dog who isn't currently napping and it will tell you so), this arcane typing lesson cleverly uses each of the 26 letters in the English alphabet. Mac users, however, did away with it back in 1991, with the introduction of System 7.0. Now double-clicking on a Mac font displays the insightful, "How razorback jumping frogs can level six piqued gymnasts!"

The phrase itself triggers the creative juices, doesn't it?

SUITCASE 3.0

Suitcase 3.0
Developer: Symantec
Price: $69.95 (street)
Contact: 800-277-3948 ext. D132; http://www.symantec.com
Requirements: System 7.1 or later, 4MB of RAM

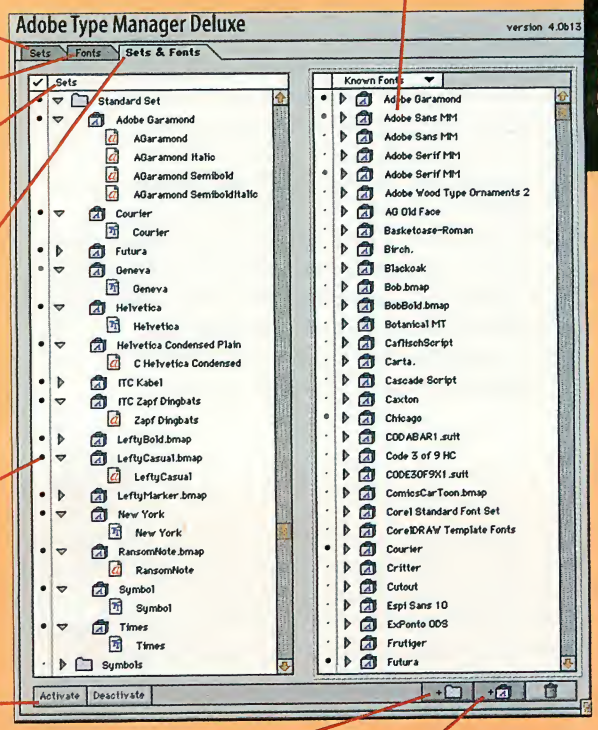
Suitcase 3.0 is an extension that packs your fonts into neat little sets and then quickly and easily loads and unloads those sets, letting you change the fonts without messy dragging in the Finder. However, to take advantage of any of the following drag-and-drop shortcuts, you'll need to be running System 7.5, or System 7.1.1 or 7.1.2 with the Macintosh drag-and-drop extension installed.



ATM Deluxe 4.0

ATM Deluxe 4.0
Developer: Adobe Systems
Price: $99.95 (srp)
Contact: 800-445-8787; http://www.adobe.com
Requirements: System 7.0.1 or later, 8MB of RAM

By the time you read this, Adobe Type Manager Deluxe 4.0—the cure for all your font management blues—should be hitting the shelves at your local Mac retail outlet. Not only does ATM Deluxe have font organization capabilities that outweigh those of Suitcase and friends, but also it offers the one thing that will revolutionize how we use fonts on-screen: anti-aliased screen fonts. This massive little innovation (hidden away in a check-box in the Preferences dialog box) turns blocky fonts into smooth, readable letter and character shapes. On-screen reading of anti-aliased fonts results in fewer headaches, better word recognition, and a smoother, better "feel" to your Macintosh screen.



The Known Fonts window shows which fonts have been enabled. Fonts can be enabled/disabled one at a time by clicking in the far-left column.

The Sets tab displays the number of suitcases and the size of each set.

The Fonts tab displays the number of fonts in each suitcase and the suitcase sizes.

The Sets window shows a listing of each set.

Click on the pop-up menu at the top of the list on the right to toggle among different views: Known Fonts, Active Fonts, System Fonts, and Damaged Fonts.

Click on the farthest-left column to turn sets on and off. Click the triangles to "open" the sets to show which fonts are inside.

The Activate and Deactivate buttons, respectively, turn on and off each selected font or set.

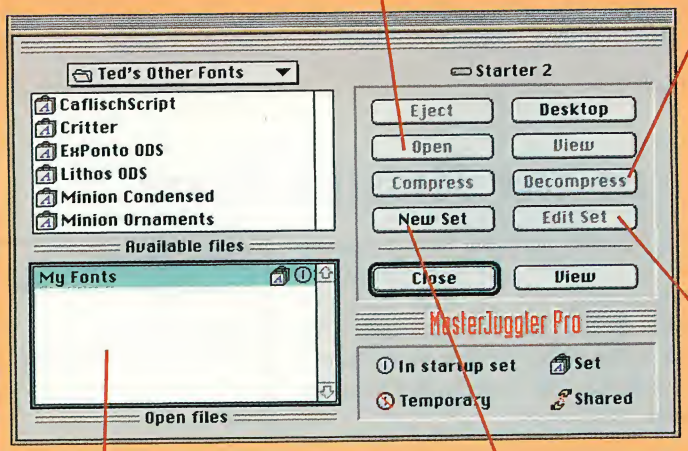
Click on the "+" folder button to add a folder full o' fonts to the list.

Click on the "+" Suitcase button to add one font suitcase to the list of fonts.

MasterJuggler Pro

MasterJuggler Pro
Developer: Alsoft
Price: $89.95 (srp)
Contact: 800-257-6381
Requirements: System 7.1 or later, 1MB of RAM

MasterJuggler Pro, like its counterparts, lets you use your fonts efficiently by storing them in sets somewhere other than in your System Folder. Although it offers many of the same capabilities as its competitors, this program is unique in that it organizes font sets so that you can move and manipulate them at the Finder level. When you open fonts using MasterJuggler, you can open either an individual font family or an entire set of user-grouped fonts.



Use the Open button to find (and create) font suitcases on your system.

The Compress and Decompress buttons reduce the size of the font suitcases. Compressing drastically decreases the amount of disk space that your fonts use and is a godsend for users with limited hard disk space (as on PowerBooks).

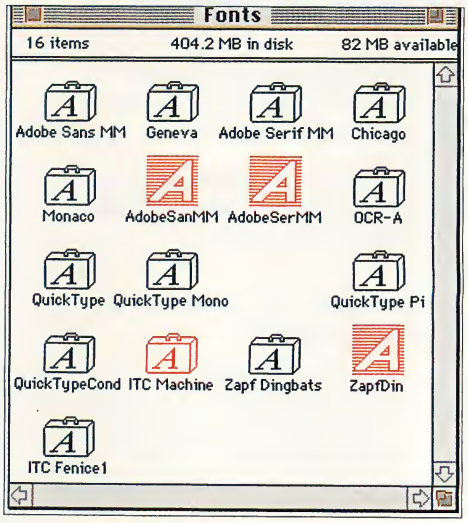
Change the contents of an existing suitcase with Edit Set.

Suitcases that are currently in use will show up in the Available files window. The symbols next to them indicate their status.

Click the New Set button to create a new set in which you can combine other suitcases or fonts.

On a Wing and a Prayer (aka: the free way)

If you're feeling resourceful, not to mention low on cash, you can manage your fonts using a lot of patience and a little ingenuity. First, store the fonts you aren't using outside your Fonts folder and drag them in only when needed. When you don't want them anymore, drag them back out. This method will help cut the amount of memory that fonts take up. It has some restrictions, the most irritating of which is that you can't remove fonts from the Fonts folder when an application is running. Also, currently running applications won't display fonts that you've just dragged into the Fonts folder until you quit the applications and relaunch them. Remember, the Fonts folder can't read fonts that are within other folders within the Fonts folder... each font must be loose in that folder if you want it to work.



Font Window Tips

Install fonts by dragging a font suitcase into the Fonts folder.

Suitcases contain files that contain sample text in that font.

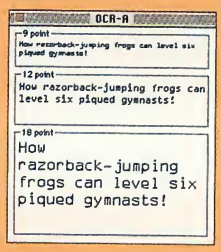
Remove fonts by dragging a font suitcase out of the Fonts folder.

Don't place font suitcases within other folders inside the Fonts folder.

Putting Faces to Names

Do you have so many fonts you've forgotten what they all look like? Hey, it happens. Even the most dedicated designers can lose track of the multimegabytes of fonts they've got stored away. Although we can't guarantee you'll never forget a typeface, we've got five hints to help you jog your memory.

1. Double-click the font suitcase, then open any of the fonts inside. A sample of the font will appear on-screen in varying point sizes.

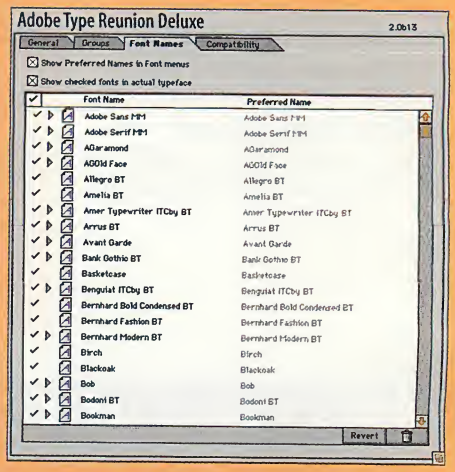


2. Use font menu management software, such as Adobe Type Reunion (which also organizes fonts by family) or Now Utilities WYSIWYG menus, to display fonts in the Font menu in the actual typefaces. Suitcase 3.0 can also display menu fonts in their own faces without any additional software, although this option is not quite as flexible as WYSIWYG menus.

3. Print out a list of your fonts for handy reference. A great freeware program called the TypeBook will generate a list of your fonts in their own faces automatically. (The TypeBook is also available in a more feature-rich shareware version, with a price to match.) If you're using ATM Deluxe 4.0, it also has the ability to print out type spec pages.

4. Keep a font catalog such as "Font & Function" (free from Adobe) nearby. Not only will it remind you of the fonts you already have but also inspire you to try new ones.

5. Tattoo the fonts along your forearms for maximum efficiency.

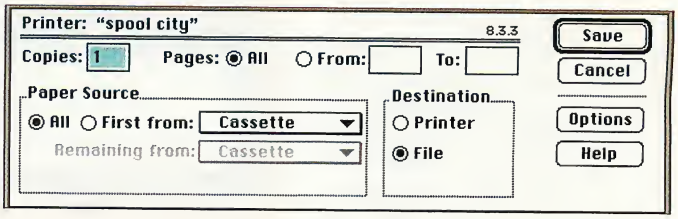


IF SCROLLING DOWN your Font menu is a day-long affair, a utility such as Adobe Type Reunion will dramatically speed up your search by organizing your fonts into manageable families with submenus.

The Mystery of the Missing Fonts

You've done an incredible logo for the Teenage Astronauts Association in Adobe Illustrator. You pop it into your outstanding new TAA newsletter and then send both files to your local service bureau. A few minutes after you return to the office, the service bureau calls, telling you it's a no-go because you used fonts that it doesn't have. Hard to believe not everyone is using BlackLotus, Disenchant, and Tranquillity.

This scenario is all too familiar to Mac users. Although it is technically illegal to give your fonts to someone else (without first erasing them from your system), what other choice do you have? A couple, as it turns out.



Print to a PostScript File.

All Macintosh applications have the capability to create a PostScript file on your hard disk. In the Print dialog box, click the Destination box and then choose the File option. This creates a file that contains all the fonts in your document. The downfall to this procedure is that it makes the file almost uneditable unless you...

Create an Adobe Acrobat PDF file. A PDF (Portable Document Format) file can be created from within any application (provided you have the Acrobat software) and can be read by anyone who has the Acrobat Reader software (free from Adobe). Acrobat files have become the standard in cross-platform document exchange for several reasons, not the least of which is excellent font handling ability. When creating a PDF file with Acrobat, you choose to include fonts or not. If you don't include fonts, Acrobat uses special substitute fonts that look a little different but always take up the same space when printing.

Font Sharing

Here's how to make a PDF file.

1. Select Acrobat PDF Writer in the Chooser.
2. From within your favorite application, choose the Print option (usually command-P).
3. Click the Print button in the Print dialog box.
4. Name the PDF file and click the Save button.

That's all there is to it! Give your PDF file to anyone with Acrobat Reader and they can print the document, whether or not they have your fonts.

Five Most Unwanted Font Problems

Chances are good that if you work with a wide variety of fonts, you'll experience at least one, if not all, of the following font-related disasters. Before you go dissing Adobe or bad-mouthing Bitstream, you should realize that most of these problems aren't as terrible as they may seem at first. Read on for the solutions to your most worrisome font woes.

1. Corrupted Fonts. This dreaded occurrence is fairly common, though many Mac users will claim they've never had a font problem. That's because it's often hard to blame any problem on a font. Weird crashes? Bizarro behavior? Most Mac users try to rebuild the desktop, using the Disk Doctor feature from Symantec's Norton Utilities on their drives, or even reinstall the System software, but few ever think of removing their fonts. To make matters worse, if you can actually pin your problems on your fonts, how do you figure out which one is the bad seed?

You can usually place blame on either the screen font portion of PostScript fonts or the entire suitcase of a particular typeface for TrueType fonts. To narrow your search to the exact font that's causing you grief, you can use MasterJuggler Pro's Font Guardian or ATM Deluxe 4.0's Verify Fonts function. If you're not using either of these utilities, you'll simply have to add fonts one at a time until the problem resurfaces; the last font you add before the problems start up again is probably your corrupted font. Delete it and reinstall it from the original disk.

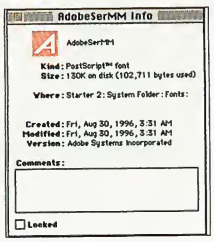
2. Installed Fonts Aren't in the Font Menu. Ooh, this is irritating. You pop a font into your Fonts folder, or install it via Suitcase or ATM Deluxe, but when you check the Font menu in QuarkXPress, the font isn't there! Grrrr. This is usually easier to fix than you'd think. A cute little dialog box appears when you drag fonts into the Fonts folder that says something like, "Fonts will not appear in open applications until that application is quit," which you've undoubtedly ignored in your rush to install the font you needed. The fix? Quit any programs that were running and launch them again. The missing fonts will appear right where you need them.

3. The Fonts *Still* Aren't in the Font Menu! This is usually a problem with PostScript fonts. Because they come in two parts (screen and printer fonts), it's easy for them to separate. If the screen font wasn't installed, the printer font does you no good, and the fonts won't show up in the Font menu. Install the screen fonts by dragging them into the Fonts folder with no applications running and fonts will appear where they belong.

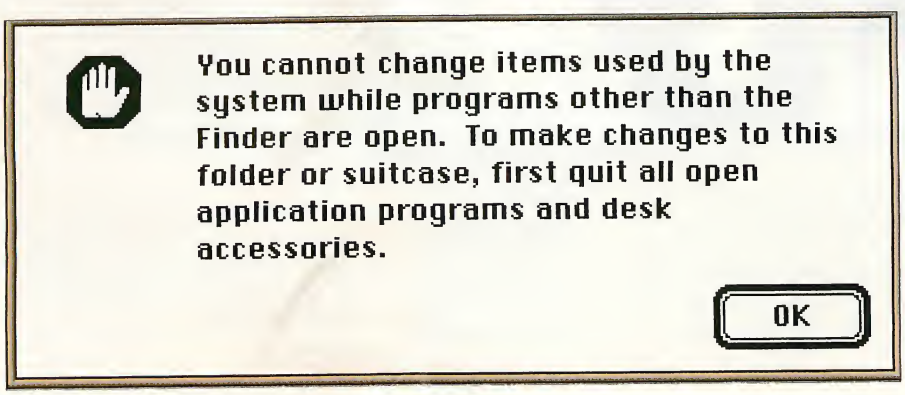
4. Font Printout (or Display) Is All Jagged and Icky. This usually happens with PostScript fonts, as the screen and printer fonts somehow become separated. The screen fonts are installed (thus giving you the ability to select the fonts in the Font menu), but the printer fonts are not. Without printer fonts, your high-end Agfa imagesetter (the one that cost more than your first house), which tops off at 3,600 dpi, is printing the 72-dpi screen fonts, stretching the built-in ones to the desired point size. For on-screen problems, ATM isn't finding the printer font, either. The fix: Just drop the printer font into your Fonts folder—it will put itself there automatically if you drag your fonts on top of the System Folder.

5. Slight Irregularities Occur When Someone Else Prints Your Document. "Gee, Ralph, the serifs look too thin on your printouts. And that lowercase "j" doesn't extend far enough below the baseline." Ralph slugs you for being a font nerd. Abnormalities happen, and you have a right to be concerned about them. This is one of the better scenarios (experiencing

abnormalities, not getting slugged), considering that so many manufacturers make what they call the "same" fonts. Other problems include document errors stating that fonts are missing, or finding a big, nasty, white area where you had laid out an essay entitled "The Whitewater Feline Conspiracy: Why Clinton will Pardon Socks."



To keep these problems from arising, ensure that your service bureau and anyone else who prints your fonts are using the same fonts from the same manufacturer as you are. Usually the icons for PostScript printer fonts give a clue as to the manufacturer of the font. The best way to check is to do a Get Info (command-I) on the suspect fonts.



Ted Alspach is the author of "Macworld Illustrator 6." Check out his Mac-generated Web page at http://www.bezier.com.

just your type

Make a funny face in just a few simple steps.

by Nikki Echler with Ken Bousquet

FIND WORKING DEMOS of the products mentioned in this article, plus awesome shareware, on The Disc.

More expressive than a mood ring, the font you choose to dress your words often says more than the words themselves. Fonts can smile, shiver, scream, or whisper. They can be chatty. They can be reserved. They can be whatever you want them to be, especially if you design them yourself. Although professional type designers can spend years tweaking a typeface, you can whip up your own in slightly less time if you're willing to live with a few imperfections. All you need to put your thoughts into letters is a little creativity, a lot of patience, and Macromedia's font design software, Fontographer.

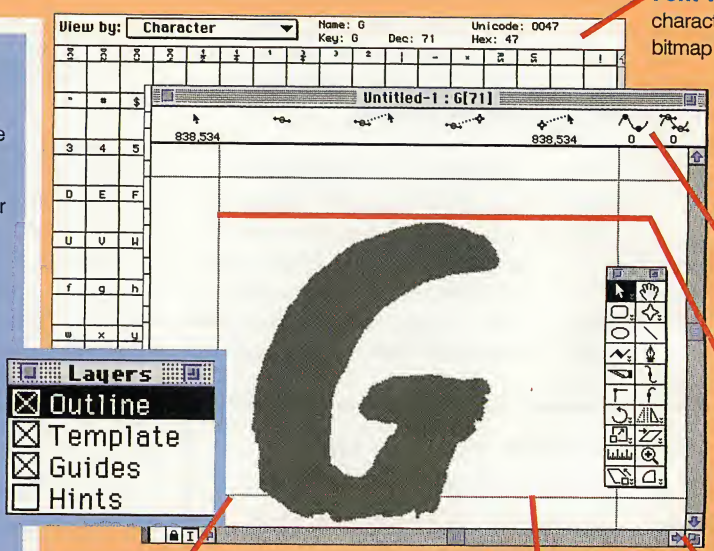
There are several ways to create a typeface. One is to import a font that you know and love, such as Garamond (the font that Apple uses), into Fontographer and then stretch it, squash it, twist it, and turn it until it looks kind of like Garamond but not. This is fine for strictly personal uses, but selling font rip-offs as your own design is illegal and unethical.

You can also create a font from scratch, or almost scratch. The first and most time-consuming step is to draw each and every letter, number, and symbol of the alphabet. Although you can do this in Fontographer, you can also use a drawing program, such as Macromedia's FreeHand or Adobe Illustrator, if you're more comfortable with its tools. Once you've perfected your characters, import them into Fontographer to turn your drawings into a usable font.

Rather than start from scratch, we took inspiration from our environment and imported the characters from a garage sale sign. Although it's fine to get ideas from handwritten samples like this, remember that you will have to recreate the same look for all of the other characters of the alphabet that aren't in the sample. Tricky business, but if you're up for it, here's what you need to know.

Fontographer Demystified

Fontographer is currently the most popular program available for font creation, so if you're going to design with the big boys, you'll need to familiarize yourself with its features. Here's a quick guide to what does what.



Font Window - This is where you'll find each character of your font on display in a 24-point bitmap format, the default. Whenever you create a new font or open an old one, you'll see this window. You can view your font in 12 different modes, but for most purposes, you'll stick with the character view.

Position Indicators - These tell you how far away your cursor is from the basepoint.

Origin Line - The origin line, or left sidebearing, marks the left side of your character's space. Where you place your character in relation to this line will determine the spacing on the character's left side.

Outline Window - The Outline window (which you open from the Windows menu) acts as an editing room. You'll do most of your font fine-tuning here.

Baseline - The baseline is the line on which all of the characters sit. It is always at a vertical location of zero.

Basepoint - The basepoint is usually where the baseline meets the origin line, at the character's origin (0,0). However, you can change the position of the basepoint to help you measure other character parts.

The Layers palette is available only while you're in the Outline window. All layers with an "x" are shown in the window, but only the highlighted layers are active.

Outline Layer - The Outline layer is where you'll create and edit your font. Go ahead and tweak those Bézier curves just as you would in any drawing program.

Template Layer - This is your tracing pad.

Guides Layer - Here you can drag lines from the origin line and baseline to create markers that will help you keep your characters at roughly similar heights and widths.

Hints Layer - Designers use this layer to add the complex details that make a font look good at small sizes and low resolutions.

STEP 1 Scan your characters

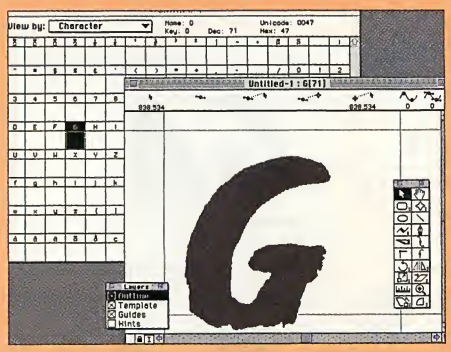
Before

After

Start building your font by following these simple directions. (If you hand-draw your font in a drawing program, you can skip this step and import your drawings directly into Fontographer.) Scan your art into Adobe Photoshop and clean up any ink spots, fuzzy lines, or white spots. Be sure to scan your font at 1½ inches or larger (you can enlarge it first with a photocopier); your letters will be easier to trace and tweak. Save each character individually as a PICT file and copy each directly into Fontographer.

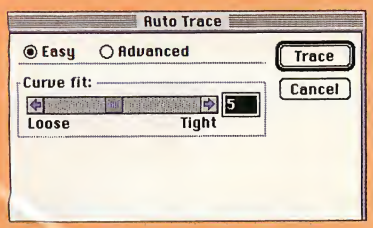
STEP 2 Copy your font

Fire up Fontographer and choose New Font from the File menu. Click the character slot in the Font window where you want to copy a character, then open the Outline window from the Windows menu, and paste in your scanned image. Do this for each character of your font.

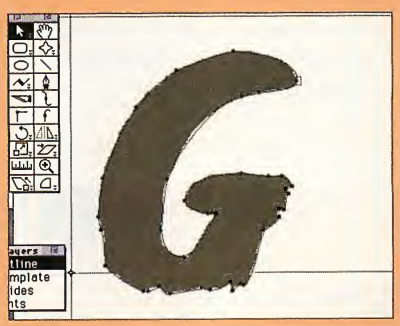


STEP 3 Auto Trace

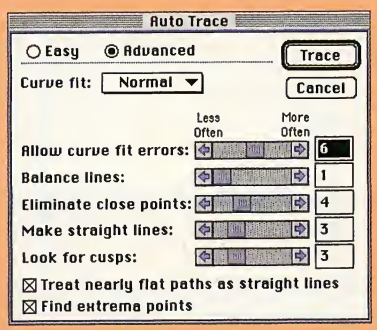
You should already be working in the Font window, so you can just double-click the character slot of the character you want to trace to open up its Outline window. Make sure that you're working in the Outline layer of the Layers palette and then trace your character by choosing Auto Trace from the Element menu. Choose Easy and stick with the default value of 5 that Fontographer offers you—this will create a fairly accurate copy of your original character. Do this for each character of your font. If you feel like experimenting, or if you aren't happy with your trace, select Advanced mode, which gives more control over the detail of the trace but also requires you to individually adjust the settings for such features as balance lines and cusps.



MOVE THE SLIDE CONTROL for a tighter or looser trace.

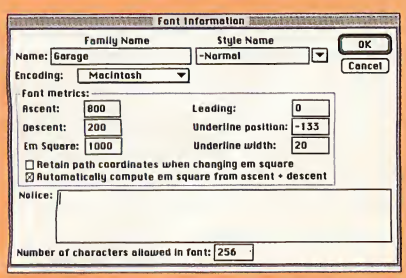


EACH TRACED CHARACTER shows the points needed to create it in the outline.



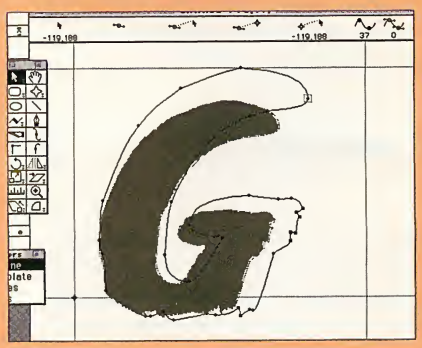
CUSTOMIZE YOUR TRACE in the Advanced mode to reduce the number of points.

STEP 4 Name once, save often



Select Font Info from the Element menu; type in a name for your font; give it a style, such as bold, normal, or italic; and then save your font. (This will apply to every character in the Font window so that you have to name your font only once.) Make sure you don't give the font the same name as any other font in your Fonts folder. If you name a font Times Roman, for example, you'll override your original Times Roman font. Always name and save your font before you generate your font files and bitmaps (Step 8), or you'll end up with strange names that are unusable and you'll be forced to start over.

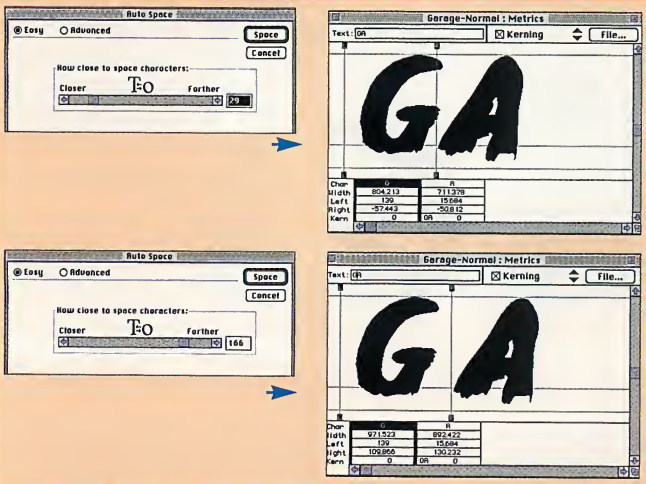
STEP 5 Scaling the character



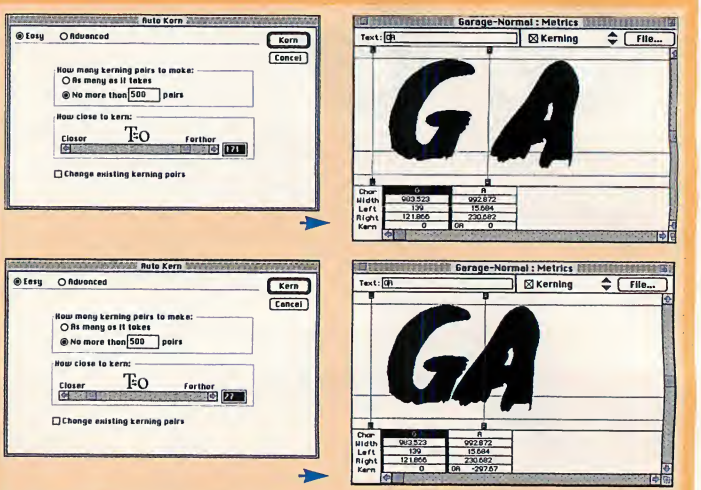
After you've traced your character, use the scale tool on the tools palette in the Outline window to grow your capital letters up to the top of the box. Do this by selecting the scale tool and then clicking on the baseline to create an anchor point. Hold down Shift and drag your font until it reaches the top of the box, then double-click to release. Design your lowercase letters to top out at half this height. Not only will your letters be easier to adjust at this larger size, but you'll find it easier to keep all of the characters in your font roughly the same size.

STEP 6 Do the math

Font metrics basically determine how fonts are spaced and kerned. (Spacing is setting the width between characters, and kerning is adjusting the width so that certain pairs of letters look better side by side.) Perfectionists may choose to set their metrics on a character-by-character basis for maximum tweaking, but most people will probably just take the easy way and set the spacing for the entire font all at once. Because spacing is the hardest part of font creation, newcomers should use the Auto Space and Auto Kern features to save a few years' worth of time.

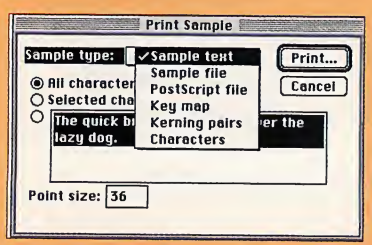


Spacing. Open the Metrics window from the Windows menu. Choose Auto Space from the Metrics menu and use Easy; this will set the spacing for your entire font. Type sample characters in the Text box of the Metrics window so that you can see how the characters are affected by your spacing decisions, then adjust the spacing value until the characters look good to you. If nothing looks good to you and you want to space your characters individually, select the Advanced mode and fill in the blanks, hotshot.



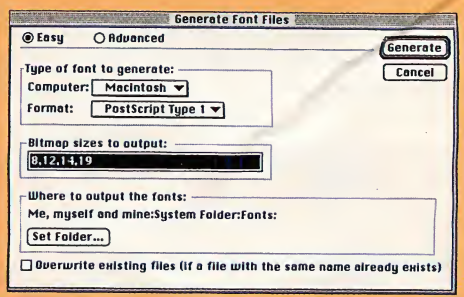
Kerning. Remain in the Metrics window and select Auto Kern. Again, choose Easy mode. Either set the amount of kerning pairs you want your font to have, or select an upper limit amount; 500 pairs is usually sufficient. Experiment with your kerning until you come up with a value that looks good to you. Again, the Advanced mode is available for those who want to individually kern all of their kerned pairs.

STEP 7 Print your options



Select Print from the File menu and type in a sample phrase using your font to see how it looks on the printed page. You may opt to print out different aspects of your font, such as the character outlines and kerning pairs. This is a good way to test how your characters work together before you actually generate the font files and bitmaps, giving life to this monster.

STEP 8 Generate your font files



You need to generate font files and bitmaps before installing your font or your computer will treat it as a mere database file, not a usable font. Select Generate Font Files from the File menu and choose the Easy mode—the Advanced mode is comprehensible only to "Jeopardy" winners and professional font designers *(it gives* control over Encoding vectors, which are *something* most people should not be changing without good cause). Choose Macintosh as the computer for which you are preparing the font, and pick a font format. TrueType fonts don't require you to set your bitmap sizes, but PostScript fonts do, unless you're using Adobe Type Manager. Fontographer automatically generates a 24-point bitmap, so if you're using ATM, you need to generate only this size. Otherwise, pick bitmap sizes that you'll use frequently, such as 8,12, 14, and possibly 19 if you'll be writing really big headlines. Finally, set the folder where you want to keep your fonts. This global process affects each character of your font, so you have to do it only once.

STEP 9 Install and use

Install your new font directly into your Fonts folder or font management software. The font you've created is real and needs to be installed before you can use it. Now that you know how to create and install your own font, you can use Fontographer for a slew of fun projects. Scan your signature and assign it to a keystroke to add a personal touch to letters. Create your own logos. Or draw out and scan your own symbols into Fontographer to create a picture-based font the same way you would with regular type. Take a look at one of our symbol samples.

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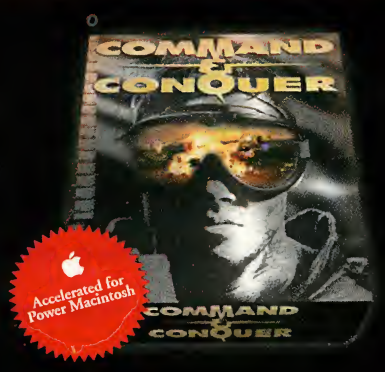

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On the road again

Ah, the American road. The sun beating down through the bug-encrusted windshield. The engine humming as it churns dead dinosaurs into loco-motion. Reflexes jacked to a keen knife edge through massive doses of black diner coffee. There's nothing like it. And where would the perfect road trip be without photos? It was probably the road trip that inspired ol' Mr. Kodak when he brought out his famous Brownies and put photography (for good or bad) into the hands of your grandma.

By Ray Larson

It's good to know that the drive to record a drive persists well into the digital age. Due in part to the World Wide Web's hunger for images of everything and everyone, several companies are reaching for a piece of the growing digital point-and-shoot market. Compared with some of the first digital camera offerings, the newer cameras produce decent images with little fuss. The digital family vacation album may soon be the party killer of the not-too-distant future.

Armed with some rockin' tapes and my trusty lab assistant, Gary, I hit Highway 101, subjecting four popular digital camera models—Apple's QuickTake 150 (an improvement on the revolutionary QuickTake 100), Casio's QV-10A (with its neato, keeno LCD viewfinder), Epson's PhotoPC (which looks most like the traditional point-and-shoots that we know and love), and the ergonomically pleasing Olympus D-200L—to a strenuous and well-caffeinated run behind Northern California's Redwood Curtain. The photos we took were saved as TIFF images and printed without any manipulation.

All four cameras can capture a 24-bit high-resolution image of 640 x 480 pixels. However, here comes bummer No. 1 from the Casio camp: The QV-10A records image information at 480 x 240 pixels and interpolates the image to the higher resolution. (The company makes other digital cameras with 640 x 480 resolution.) This means the camera looks at neighboring pixels and creates extra pixels through logarithmic calculation, resulting in an image with extra data but no extra information. Although low-resolution images look like cubist paintings, they are smaller, which leaves room for more images. The QV-10A can store up to 96 images before it runs out of memory. The QuickTake can store 32 low-quality images or 16 high-quality images, the D-200L can store up to 80 low-resolution or 20 high-resolution images, and the PhotoPC can store either 32 low-resolution or 16 high-resolution images (an optional memory module is available that can boost the Epson's storage up to 80 high-resolution or 160 low-resolution images.) The storage advantages of low resolution must be weighed against how the images are going to be used.

Batteries in all four cameras should be good for at least 100 shots, so that's not much of a worry. A word to the wise—the LCDs in the Casio, and the D-200L burn up a lot of power. The D-200L especially seemed to be a juice hog going through a set of batteries after shooting just 20 pictures.

The Heart of DARKNESS

For fans of David Lynch's "Twin Peaks" vibe, might I suggest a tour through Humboldt County's mega-wooded Avenue of the Giants.

Driving into the old logging town of Redcrest is like driving onto Lynch's set if he were filming "The Hobbit." A must-see for any wayward traveler is the living tree house, a roomy little crash pad hacked out of a redwood tree by a very determined logger. A word to the photo-wise: The lighting on the Avenue of Giants is pretty dark and shadowy because of... well, because of all those giants. To deal with this, both the QuickTake and the PhotoPC have three flash modes: automatic, forced, and off. Automatic means that the camera decides if a flash is needed; forced means that the flash will go off when you snap the photo, regardless of the lighting conditions. The Olympus D-200L has a fourth flash mode designed to deal with red eye. In this mode, the camera emits a series of low-power flashes before popping the big

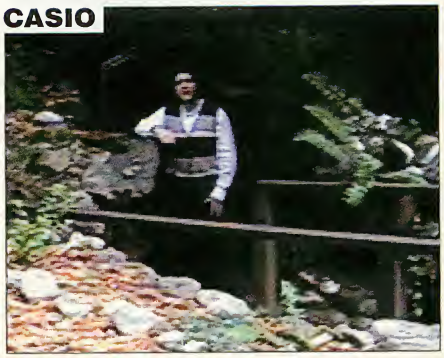
APPLE: THE QUICKTAKE 150'S forced flash brought out some of the detail in the shadows around the treehouse entrance and helped fill in the image.

EPSON: THE PHOTOPC'S fill flash helped bring out the detail in the darker areas around the tree, and the camera showed good color balance and nice detail.

CASIO: WHILE THE QV-10A was able to do a good job with the subject standing in the photo, the shadows were all but black without the benefit of a secondary light source.

APPLE

CASIO



EPSON

WACKY Digital Camera PROJECTS

- Spice up your e-mail. Granted, the Internet allows for a certain measure of anonymity, but why languish in obscurity when you can clone your head onto Brad Pitt's manly man torso and... on second thought, that's pretty pathetic. Attach snapshots of yourself smiling and the world smiles with you.
- Fool your friends! Drop a few photos of your closest pals into your favorite layout program and in no time: faux "wanted" posters. Put up a few around the ol' post office, stand back and watch hilarity ensue. Note: check your local and federal statutes.
- Create an on-line vacation photo album. Take your very own road trip. Pack up the family truckster, dump off the kids and/or animals and get yer motor runnin'. If you have a laptop and a modem, you can see the sights by day and post them on your server by night. For a great example, check out Stephen R. Banks's trip to Disney World at http://www.neosoft.com/sbanks/vacation/vacation.html.
- Become a 'zinester/'zinestress. Tired of slick magazines full of nothing but pouty underfed perfume models? Make your own magazine. Document your scene and maybe some day busloads of tourists will cruise the very streets you used to walk before you got filthy rich and moved next door to Mick Jagger.
- Catalog your stuff! I know it doesn't sound glamorous, but since you're not paying for film processing, you can't afford not to document all your high-tech and low-fi gadgets for when the unthinkable occurs. Don't forget to put your image disks in a safe place. (Zen tip: contemplate how to take a photo of your digital camera and reach nirvana within hours!)

flash. These pre-flashes make the subject's pupils contract, so the eyes don't reflect as much of the bright light. Although the QV-10A doesn't have a flash, it does give you the option of choosing between an aperture setting of F8 (a small-iris setting useful for brighter light) or F2.8 (a large-iris setting useful for darker areas). The other three cameras do not allow you to choose an aperture, which may be good or bad depending on your camera knowledge and how much thought you want to put into it. To help you out, the QV-10A will tell you when the shot will result in an over- or underexposed image.

Shooting in heavy shade on an overcast morning against a dark background of redwood trees, I used the forced flash to try to bring out some of the textured background—if left on automatic, the camera might have thought there was enough light and that a flash wasn't needed. The QuickTake and the PhotoPC both produced good images, but shadows in the QV-10A image were all but black. (We were unable to test the Olympus at this site due to scheduling problems.)

As we tooled on past the towering redwoods, I got to thinking how this century will probably be known as the last golden age of the road trip. From a society that didn't venture too far from the homestead to the car-crazy '50s, '60s, and '70s, and now back again as more people are taking the info autobahn offramp to leisure, a lot of cool Americana may be left high and dry. I'm talking about the last true vestige of the roadside entrepreneurial spirit: the drive-through tree. As more and more people poured onto North Coast highways, a strange phenomenon manifested itself. Perhaps it was some Freudian thing. All these towering giants can make an otherwise well-adjusted motorist feel a little insignificant. The drive-through tree was born out of the public's need to feel more important.

The stretch of 101 between Leggitt and Klamath boasts a plethora of these automotive oddities. Taking drive-through tree photos found us shooting from an area of bright overhead light against a dark background. This brought out the QV-10A's bummer No. 2: The camera does not have a camera-style optical view finder.

Seeing your photos on the LCD while they're still in the camera is really cool—when you can see them, which is not the case in bright sunlight (although the LCD can be seen under less intense lighting conditions). Before I learned not to try to get the LCD image to look good before I took the shot, I blew out a lot of images using the manual exposure adjustment.

The D-200L also has an LCD display build into the camera; however, it also has a standard fixed viewfinder. The LCD was designed mainly to view photos after the fact, which is a nice feature, considering the storage capacity of the camera. With a preview feature available in the field, you don't end up carrying around bad shots at the expense of other shots you could be taking. The Olympus performed the best here, providing images with sharp edges, nice detail, and good color, with the Epson coming in a close second. The QuickTake did OK, but its images were a bit fuzzy.

APPLE: THE QUICKTAKE 150's image caught nice tree bark details.
CASIO: THE QV-10A's interpolated images hurt the scene's finer lines.
EPSON: THE PHOTOPC handled both foreground and background detail well.
OLYMPUS: THE D-200L also showed off its ability to capture a sharp image with good color balance.

HOW They Work

Digital cameras capture image information in much the same way a digital scanner does. Light, whether reflected (in the case of a flatbed scanner) or directed through a camera lens, travels through red, green, and blue color filters, striking light-sensitive elements, collectively called a charge-coupled device (CCD). On flatbed scanners and high-resolution studio cameras, the CCD contains a single row of elements and slowly travels the image area recording information line by line. Anyone who has tried to will a flatbed to scan faster can see the inherent problem in shooting a football game with a high-res digital device. Cameras that shoot in "real time" must expose an entire grid of photo elements at once to capture the image immediately. Because less information is being collected, this method produces lower-resolution images. Once the image information is collected, the camera converts the CCD's electrical charges into digital information ,or pixels.

Get MORE Out of Your Pixels

Photoshop (or some other image-retouching software tool) can be invaluable in helping you make your images come alive. Each digital image is made up of colored dots called pixels. Think of the pixels in your raw image as your paycheck after you cash it. Some pixels are $20s. Some pixels are $5s. You start out with a certain amount of cash when you get off work, and everything that happens to you afterward is going to change that. The idea here is to get into a real good head space by Saturday night and still have money left to pay the rent. Every tweak that you subject your photo to is going to affect your cash flow until you're left flat with a pocket full of $1 bills.

Fortunately, you can often bring your photo into line with a modicum of spending. Some tips on how to get the best out of your pixels in Photoshop follow.

The Devil's in the DETAILS

Another anomaly of the great northern highway is the ever-present burl store. Every cousin with a patch of ground along the side of the road from Orick to the California-Oregon border has his own shop, stand, or pile of burl. Any object you can possibly think of can be found here, carved out of the knobby wood, usually with a chainsaw.

Here we tried to show how the cameras captured a still-life scene with varied textures, colors, shadow, and highlight detail. Some of the texture detail in the QuickTake's redder tones appears mottled. A look at the color channels in Adobe Photoshop shows more noise in the blue channel of this photo than of the other two photos. The QV-10A photo shot at F8 shows the best contrast yet isn't as sharp as the others. The PhotoPC and the D-200L came pretty close with good combinations of color balance and sharpness.

APPLE: ALTHOUGH SALVAGEABLE in an image-editing program, the QuickTake 150's image was overly dark.

CASIO: THE QV-10A had the best contrast but didn't hold as much detail as the other cameras.

OLYMPUS: THE D-200L, like the PhotoPC, did a good job with color and detail but didn't produce the best contrast.

EPSON: THE PHOTOPC CAUGHT images that were lighter than the QuickTake's, and it came away with good color and detail as well.

APPLE

CASIO

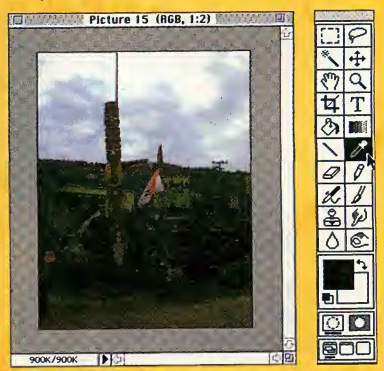
EPSON

OLYMPUS

Tip 1: Light and SHADOWS

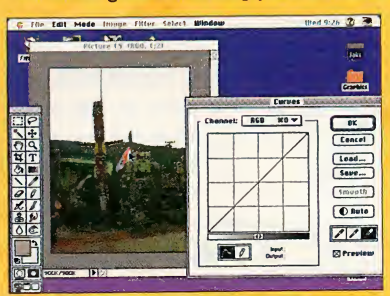
One of the best ways to improve a digital photo is to get the tonal range right. To do that, avoid Photoshop's Brightness/Contrast controls. Why kill a bug with a truck when a hammer will do? These linear controls affect your tonal range by stretching or limiting your overall range of color values, resulting in less opportunity for detail.

Instead, choose the eyedropper tool in the Toolbox and then go into the Curves menu. (If you don't choose the eyedropper tool first, you won't be able to use it for adjustments.) Use the nonlinear Curves dialog box to adjust your color tones by selecting Adjust-Curves from the Image menu (or just hit command-M). Often, the only thing you need to do to spruce up that snapshot is to set a highlight and shadow point. This process gives you the best tonal range for your photo and can correct some color problems.

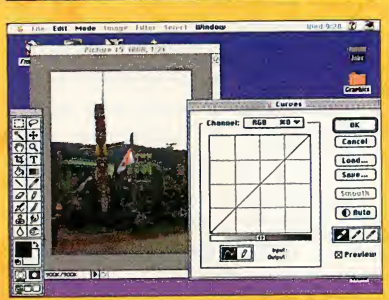


SELECT THE EYEDROPPER tool before going to the Curves dialog box.

To set your highlight values, click on the lightest point in your image. Especially nice are items that you know are supposed to be white, in this case the white strip in the flag. The same goes for setting your shadow point.



ONCE YOU HAVE the eyedropper and you open the Curves dialog box, you can set your highlight value by clicking on the lightest point in the image, preferably something white.

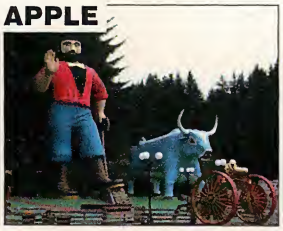


SETTING THE shadow point is much the same, only you should select the darkest part of the image with the eyedropper.

The Advantages of DISTANCE

After fortifying ourselves with more coffee, we set out for the Mecca of roadside cheese. Perched alongside 101 between Klamath and Crescent City sits the amazing, colossal Trees of Mystery. I have to admit that although I've been there many times, I've never actually paid to see the so-called mysterious trees. For me, the big thrill is the giant Paul Bunyan and his humongous blue ox. What these two are doing so far from Brainerd, Minnesota, is beside the point. All four cameras performed well in shooting faraway objects in direct sunlight. A forced flash helped alleviate the greenish cast to the photo and bring out the "skin" tones in Paul Bunyan in the QuickTake, D-200L, and PhotoPC shots. The QV-10A shot suffered from not having a secondary light source (there was no way to fill in shadowy areas, so they simply turned black), and again the LCD was hard to see in the sunlight.

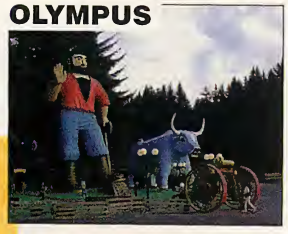
APPLE



CASIO

EPSON

OLYMPUS



APPLE: THE QUICKTAKE 150 produced reasonable "skin" tones with a flash.
CASIO: WITHOUT A FLASH, the QV-10A couldn't quite handle shadow areas.
EPSON: THE PHOTOPC picked up nice color in the green and red zones.
OLYMPUS: THE D-200L turned out a nice, if dark, image.

Close Up and PERSONAL

At the end of every good American road trip lies a gift shop. Despite the manual's warnings against shooting under fluorescent lights, all four cameras performed well. The QV-10A and the D-200L come with a macro feature that allows for detail close up. The QuickTake comes with a "snap-on" lens (read: "lost" on any road trip). The PhotoPC has a threaded inner ring above the lens where you can screw on 37mm video camera lenses if you want to get up close and personal. You'll have to buy, beg, or borrow a lens to take advantage of close-up shots for the PhotoPC.

Both the D-200L and the QV-10 pulled ahead of the other two cameras inside the End of the Trail museum, where there sits a pair of the strangest mannequins I have ever seen. They look like a leathery old Native American couple with a sign that reads, "Please, no flash photography, we are old and fragile." The QV-10A was able to pick up the ambient light in the room at F2.8, and the D-200L automatically opened up to capture decent images, whereas the other two cameras could not read the room without a flash. Upon closer inspection, the Native American mannequins seemed to be made of some kind of hide. We got the hell out of there.

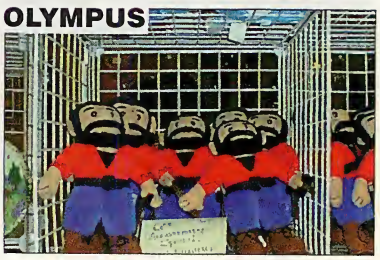
APPLE: THE QUICKTAKE 150 came away with decent images, considering the color cast that fluorescent lights can add.
CASIO: THE QV-10A did well up close, showing good contrast and color under adverse lighting.
OLYMPUS: THE D-200L handled detail quite well, as shown in the bars. The color, however, did suffer a little.
EPSON: THE PHOTOPC created an image with good detail and lighting (just a fraction lighter than the QuickTake).

APPLE

CASIO

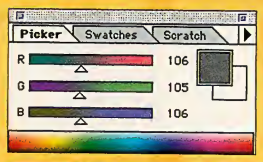
EPSON

OLYMPUS

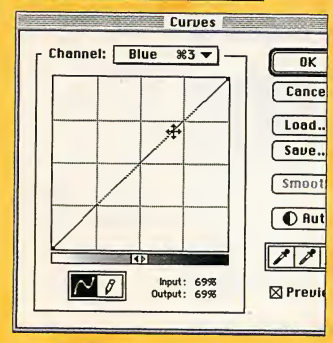


Tip 2: REMOVE Color Casts

Use that eyedropper tool that you thoughtfully picked up before getting this far and take a reading off of something in the photo by clicking the eyedropper in the neutral area—a white shirt, a gray sidewalk, Switzerland. Check out the numbers in your RGB color picker (available in the Window menu under Palettes-Show Picker). If the values of red, green, and blue aren't almost equal, you have a color cast. The sliders in the picker should give you a good idea of what channel needs to be altered. Go to that channel in Curves and hit your neutral spot again. This will show you at what point on the curve you should start to tweak.



Until you develop a feeling for how tweaking the different color channels will affect the others, the Variations dialog box (Image-Adjust-Variations) gives you an array of thumbnails showing what adding or subtracting each color will do.



USE PHOTOSHOP'S eyedropper tool to help correct a color cast.

Extracting GOLD

The End of the Trail was most definitely the end of the road. Two of the cameras come with a handy-dandy program to ease image downloading onto the Mac. The QuickTake comes bundled with Storm Software's PhotoFlash, a pretty intuitive *little* program that allows you to do some basic image manipulation and color correction.

Offloading the images is as easy as opening PhotoFlash, loading thumbnails of the images in the camera, and clicking on the photos you want on your hard drive. Each photo took about a minute to download from the camera onto the Mac. Photos can be saved by subject into an on-screen catalog, which looks like a color contact sheet. PhotoFlash supports scripting for placing the images directly into most page layout programs and allows images to be saved in PICT, TIFF, JPEG, or EPS format, which ensures they will fit just about anywhere.

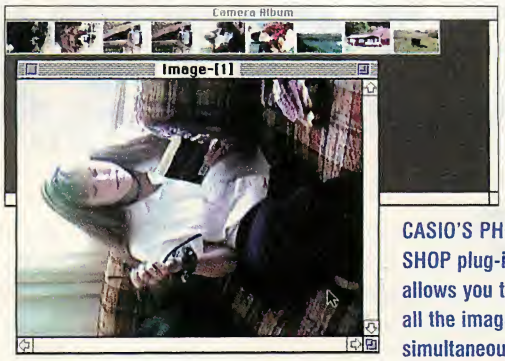
The PhotoPC comes with its own imaging software, called EasyPhoto. Like PhotoFlash, EasyPhoto has an option of bundling like-minded photos together in groups, called Galleries. Someone at Epson thought it would be really cool to make the galleries look like a strip of film, which pre-empts seeing thumbnails of all of the images at once. The program does have an interesting feature that will create galleries for you by finding similar shots or similar words or phrases in the photo titles. However, I found that the similar shots were usually right next to each other in the gallery in which I originally downloaded them, and the program often still couldn't find them.

Again, like PhotoFlash, the real keen feature of EasyPhoto is its Photoshopesque Workshop. Both programs allow for simple cropping and color, brightness, and contrast adjustment without the mega-drive space and wallet impact of true Photoshop. Unlike PhotoFlash, EasyPhoto supports only two file types. You can save photos as either JPEG (default) or PICT.

The QV-10A came to the party carrying only a Photoshop plug-in and a very simple camera-to-Mac application that doesn't allow for tweaking images. The QV-MAC program will create photo albums, but the thumbnail images are pretty small. On the upside, each photo takes only a few seconds to import into the Mac. An interesting feature of the QV-10A allows you to display photos singularly or in slide-show mode on a television with a video input. This is great for those crazy multimedia acid test shows in the living room. Woo Hoo!

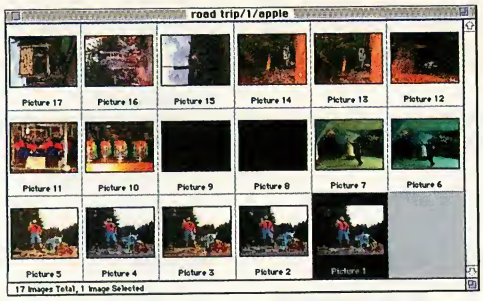
The D-200L comes with a Photoshop plug-in that worked quite nicely. Once you connect to the camera from Photoshop, a proof sheet automatically pops up, showing thumbnails of all the images in the camera's memory. You can then pick and choose which images you want to download and which you want to delete.

All four cameras we tested allow you to add a touch of personality to just about any project your fevered brain can muster up. Anyone with limited Photoshop knowledge can take the photos from any of the three programs and within seconds have Net-ready GIF or JPEG images. Our favorite point-and-shoot (figuring in ease of use, image reliability, and cool post-road trip software tweakability) would have to be Epson's PhotoPC, with the Olympus coming in a close second. The PhotoPC gave us all-around better image quality with fewer hassles than Apple's QuickTake or Casio's QV-10A, and it didn't eat batteries like the Olympus did. It's a great piece of digital equipment that any asphalt running caffeine junkie would be proud to take on the road.



CASIO'S PHOTOSHOP plug-in allows you to see all the images simultaneously.

EASYPHOTO LETS YOU do some basic image editing. Unfortunately, you can see only a few images in the gallery at one time.



PHOTOFLASH MAKES CONTACT sheets that show all your images at once, and the program is scriptable.

Tip 3: LIGHTEN or Sharpen the Image

To lighten or darken the overall image after you have a pretty good color balance, use the RGB curve. Remember, it's not brain surgery, and you can always go back (you did save your original image, right?), so yank away! There's only one way to get a feeling for what the controls do—use them.

Also, most digital images need a quick sharpen. The best way to make them snappy-happy pappies is with the Unsharp Mask filter (Filter-Sharpen-Unsharp Mask...). This filter tells Photoshop to look at all neighboring pixels, and if their tonal values are far enough apart, to boost the contrast between them even further in a effort to define an edge. The amount control affects how intense the haloing effect will be, whereas the radius control determines how wide it can be. The threshold control is what tells the program how far apart the pixels have to be before it thinks there is an edge. Start with a low threshold value between two and four to achieve sharper images.

On the downside, sharpening tends to bring out noise in the shadow areas. For an example of noise, compare your blue channel with the other two. It's a fine line between sharp and shineola. Only experience is going to keep your shoes clean.

DIGITAL vs. FILM. Are You Ready to RUMBLE?

First of all, let me wimp out a bit by saying that pitting digital point-and-shoots against their filmic cousins is a lot like pitting Mothra against the venerable lizard king Godzilla. They are both cool monsters, but Mothra's the new kid on the block. Come on, Godzilla's been encased in a block of ice for millions of years, working on his shtick. He's got it down. That said, there are a lot of good reasons to watch the digital corner in the years to come.

- You will never have to buy film again. Or go to buy film and find out the store is closed on the morning of... (insert once-in-a-lifetime event here).
- No harsh developing chemicals to worry about. Do the earth a favor. Silver should be in your Mama's turquoise jewelry, not in the water supply.
- You get your photos instantly. No more waiting for the lab to get around to developing your film. (Why does black-and-white film take a week to process when it was simple enough to do in high school photo class?) Great for those pesky deadlines!
- No more scratched or faded negatives. Digital images will always look exactly the same unless you lose the disks.
- Which brings us to backups. How many extra sets of important negatives have you ever owned? Safe backups of your cherished moments or blackmail material are as easy as dragging an icon.

Of course, film cameras are not going to be consigned to the garage sale table anytime soon. There are still many reasons the traditional medium is not pulling a fade.

- Mo' money, mo' money, mo' money! Digital cameras still cost two arms and a leg more than the standard 35mm point-and-shoot. But then who remembers the pocket calculator when it first appeared? Granted, it will be some time before the technology becomes cheap enough to put a digital chicken in every pot.
- Storage. Until digital cameras come with removable storage that rivals the ease and flexibility of changing a roll of film, intrepid digital photographers can't venture too far away from the computer. "National Geographic" isn't about to drop someone in the middle of the Congo with the capacity to store only 16 high-resolution images at a time.
- Photo quality and flexibility. So far only images from mega-expensive professional cameras can approach the clarity and resolution of the most basic film camera. With a few exceptions, most high-quality digital cameras are going to be found in the studio rather than on the sidelines.
- No dependency on computers. Addicted as we are, it is easy to forget that not everyone has a computer on which to download their digital photo album. Until the local Fotomat jumps on the bandwagon, you're not going to entice everyone to join the pixel parade.

Ray Larson does graphic design and enjoys playing in his band between road trips.

Take Your PICK

Name		Resolution	Images stored	Flash	Viewfinder	Price
Apple:	**QuickTake 150**	640 x 480 640 x 480	16 high res 32 low res	Yes	Optical	$599
Agfa:	**ePhoto 307**	640 x 480 320 x 240	36 high res 72 low res	Yes	Optical	$599
Casio:	**QV-10A**	480 x 240	96	No	1.8" LCD	$399
	QV-30 Telephoto	480 x 240	96	No	2.5" LCD	$649
	QV-100	640 x 480 320 x 240	64 high res 192 low res	No	1.8" LCD	$629
	Epson: PhotoPC	640 x 480 320 x 240	16 high res 32 low res	Yes	Optical	$399
	PhotoPC 500	640 x 480 320 x 240	30 high res 60 low res	Yes	Optical or optional LCD	$500
Fujifilm:	**DS-7**	640 x 480	30 high res 60 low res	No	LCD	$699
Kodak:	**DC20**	493 x 373 320 x 240	Up to 16	No	Optical	$299
	DC25	493 x 373 320 x 240	14 high res 29 low res	Yes	Optical or LCD	$499
	DC40	756 x 504	48	Yes	Optical	$599
	DC50 Zoom	756 x 504	22 high compression 11 medium compression	Yes	Optical	$899
Olympus:	**D-200L**	640 x 480 320 x 240	20 high res 80 low res	Yes	Optical or LCD	$599
	D-300L	640 x 480	1,024 x 768 high res 512 x 384 low res	Yes	Optical or LCD	$849
Sony:	**DSC-F1**	640 x 480	108	Yes	LCD	$849

REACH OUT AND TORCH SOMEONE.

F/A-18 HORNET 3.0

The hottest combat flight simulator is about to blow you away – again. It's F/A-18 Hornet 3.0. With even more realistic instrumentation and weapon system modeling, rolling terrain, extensive wingman commands, a virtual cockpit system with target padlocking, and even a comprehensive CD-based tutorial featuring over 90 minutes of instruction with diagrams and replay footage. F/A-18 Hornet 3.0 will push you to the outer limits then bring you screaming back to earth. So pick up the award winning F/A-18 Hornet today. It's the best way to get close to someone.

GRAPHIC SIMULATIONS CORPORATION
www.graphsim.com/graphsim

Quest for System 8

OBJECT OF THE GAME:

Sick and tired of waiting for Mac OS 8 to be released? Now you and your friends can pretend you're doing something about it by playing Quest for System 8. You circle the board, collecting System 8 components (represented by M&Ms). Once you have at least one of each component, land on the Compiler square and then go to the Installer to win the game.

WHAT YOU'LL NEED:

- A bag of M&Ms.
- Game pieces (coins, old SIMM modules, etc.).
- One six-sided die.

WHAT YOU'LL DO:

- Place M&Ms in each of the component squares in the center of the game board. When a player "finds" a component, he/she collects an M&M.
- Put the game pieces on the Compiler square in the center of the board.
- Roll the die to see who moves first. Highest roll goes first.
- Taking turns, each player rolls the die and moves his/her piece around the board.
- The player follows the directions on the square upon which he/she lands.
- Land on the restart square and you must start over from the beginning, losing all components.
- When visiting Apple Campus, Bill's House, Macworld Expo, or Tech Support Hell, divide all rolls by two and round up.
- Once you've landed on the Compiler with all the components, proceed one square per turn to the installer.
- Making deals and trading components is allowed and even encouraged, simulating the shifting alliances among high-tech corporations. Players may collect more than one of each component.
- Place "lost" components on the Compiler square. The next player to land on the square collects them.
- Make it to the Installer square first with one of each of the System 8 components, and you win!

ILLUSTRATIONS BY: DAVID POVILAITIS

This Old Mac: Mac Plus

By T. Kelley Boylan

Welcome to "This Old Mac," our new series for those of you who have older-model Macs that you want either to put back into use or to upgrade. We'll tell you exactly what you can still do with aging Macs, how to upgrade them, and where to get the software and hardware you need. We'll even tell you how much all of it will cost. This article, the first in our series, discusses what to do with a Mac Plus, the oldest still-useful Mac around.

The Mac Plus, a quaint gadget, is usually relegated to a closet or life as a fish tank. And although it does make a fine fish tank (see http://www.nku.edu/~mcohen/macquarium.html), there's life in that putty-colored box yet. Here's how to set up a Mac Plus for Internet access, word processing, and simple graphics. Note that most of this advice works for a Mac SE as well.

FIND SHAREWARE and demos on The Disc.

CHECK THE WEB SITE for helpful links.

What You Have to Work With:

4MB of RAM. That's it, folks, no more unless...

A 68000 processor blazing along at 0.8 MIPS (millions of instructions per second). A PowerBook 540 does 29 MIPS, 3,600 percent faster. Let's not even ponder what PowerPC processors can do.

No internal hard drive. There's no place to plug it in.

Black-and-white, nine-inch display.

Standard connectors: two serial ports and a SCSI port.

Now you're thinking, "Fish tank, here I come!" But wait; it's still a computer. It's no Photoshop monster and it chokes on Word 6, but it still mixes text with graphics, still prints WYSIWYG images, still communicates via a modem, and still runs System software. It also still stores data on a SCSI device. What more do you want? (Don't answer that.)

Believe it or not, there are companies that use Pluses to run their whole businesses; see Guy Kawasaki's Evangelist site at <http://www.evangelist.macaddict.com> for details. Granted, you won't be rendering 3D images on a Plus, but no one rendered them 11 years ago when a Plus sold for more than $2,000! Somewhere in the world are your offline friends and relatives, cold and lonely and not on the Net. A refurbished Plus costs nearly nothing (about $90 without a keyboard or a hard drive) and can give those poor lost souls at least e-mail.

What To Do About Hardware

RAM: Believe it or not, four megs is enough to run useful software. Naturally, there's a catch. (There's always a catch). If you have an early-model Mac Plus, it may not be able to see all 4MB of RAM. Under the Apple menu, open About This Macintosh (or its System 6 equivalent, About The Finder) to see how much RAM your Mac thinks it has. If it says less than 4MB and you know you have 4MB installed, prepare for surgery. The only way to be sure all four are really there is to open the case and look.

If all four RAM slots are filled and your Plus says you have only 1MB or perhaps 2.5MB of memory, it's time to cut. Use a number 8 Torx wrench to open the case. There are two screws under the handle, two along the bottom of the case, and one screw under the battery.

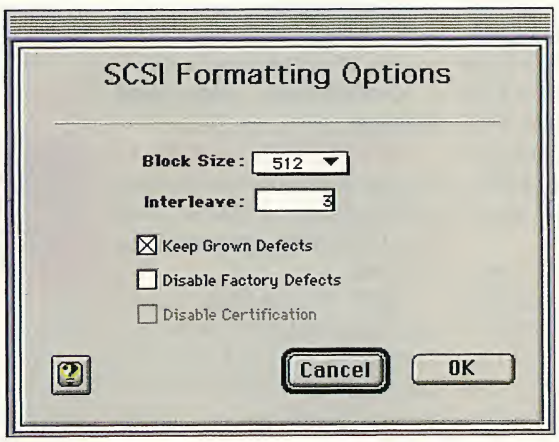
WARNING: Fiddling with a compact Mac's innards is risky business. The monitor's CRT (cathode ray tube) stores enough electricity to make you lay down and be still for an extremely long time (approximately forever). Don't open it unless you know what's in there.

Once the case is off, ferret out resistors R8 and R9 on the logic board. The labels R8 and R9 are marked on the motherboard itself. If either location has a resistor, snip it with a pair of wire cutters. If only one is installed, cut it. If both are installed, cut both. In later Pluses, the resistors weren't even installed.

Storage: Older Macs such as the 128K and 512K don't have a SCSI connector, but a Plus does. Use any external SCSI drive, up to two *terabytes* total (think of a terabyte as a thousand 1GB hard drives). That's as much storage as System 7.5.5 can see, and on a Plus, that's enough.

You'll need to reformat the hard drive or else it will be insufferably slow. Here's why. On faster Macs, such as those with a 68030 or faster processor, a drive can be formatted so that data is written to and read from the disk on each complete rotation. This means that the drive has an interleave of 1:1. Older Macs such as the Plus, however, have slower processors. If a drive were formatted with an interleave of 1:1, it would be completely out of sync with the speed at which the processor could manage data. The result would be very slow data reads and writes—for example, slowdowns when opening files or saving data.

To reformat a new drive, use a utility such as Apple's HDSC. Put the utility on a bootable floppy disk, insert the floppy into the Mac Plus, and restart. HDSC will automatically set the interleave to 3:1. If HDSC can't see the drive, hook the drive to another Mac and use a tool such as Anubis (CharisMac, 916-885-4420) or Hard Disk Toolkit (FWB, 415-325-4392) to reformat it. You'll need to *manually* set the interleave to 3:1. There's a specific setting for it, such as this one from FWB's Hard Disk Toolkit:



IF YOU BUY A NEW HARD DRIVE FOR YOUR PLUS, you'll need to reformat it and set the interleave to 3:1.

Given that a Plus is an elderly device, consider an Iomega Zip or Jaz, SyQuest Syjet, or other removable-media drive for storage. Why? There are four reasons:

1. New hard drives are fast, and a Plus just isn't fast enough to use that speed. Removable-cartridge drives such as the Zip are a tad slower and, therefore, a better match.
2. If you have another Mac, you can use the removable media for backups. If not, you can use it to back up your Plus.
3. You probably won't need tons and tons of storage room on a Mac Plus—maybe even less than 200MB for just text or Internet access—so a 1GB drive is overkill.
4. One day your trusty Plus may die. On that sad day, you'll still have a handy device left over.

Video: You're pretty much stuck with the basic black-and-white, nine-inch display. At one time, some vendors made SCSI video adapters that let you display eight predefined colors on an external monitor. However, these are now very hard to find, and because they are slow and hog your SCSI port, we don't recommend using them.

Modem: Any modem will work; just make sure that the cable can connect the Mac's serial port with the modem.

The modem's another place to save money. A Plus serial port runs at a maximum of 9,600 baud, so there's no need to invest in a 28.8Kbps or even a 14.4Kbps modem. Cost: less than $50 for the modem, $10 for a cable.

Printer: Most printers will work, from Apple's old ImageWriters to new LaserWriters. Look into used inkjets such as Hewlett-Packard's DeskWriter and Apple's StyleWriter II—they cost as little as $130. (Caveat: StyleWriters newer than the II need an '020 or faster processor.) Finding the software driver to make your Mac talk to your printer is not so simple. Before you buy a printer, call the manufacturer and try to locate an old driver; newer versions are RAM-hungry in a big way. A DeskWriter, for example, works fine on a Plus with the DeskWriter driver 3.1, which is still available from HP.

Hot Tip:

Some Quantum drives aren't happy on a Plus. Unit attention must be turned off. Anubis and Hard Disk Toolkit both give you access to such low-level settings.

More sources for old Macs...

- Check <newsgroupcomp.sys.mac.forsale>
- Also look in local newsgroups; e.g., <*yourcity*.forsale>
- Use your favorite search engine to search for "used mac"
- Peruse the phone book under "Computers, Used"
- Watch the newspaper's "for sale" section
- Ask around—you may be surprised by how many people have old computers stashed in the closet that they'll just give away

For more ideas

How else can you use a Mac Plus (or Mac SE)? Point your browser to <http://members.aol.com/jeffwtzmn/index.html>. Jeff Weitzman has kindly created a list of ideas that includes the following:

- Internet server
- Fax machine and/or fax-back server
- Network monitor
- Data acquisition
- Stock and financial monitor
- Model train controller
- Master controller for a "SmartHome"
- Bathroom Mac, for the true Macaholic
- Decorative glass brick

Hot Tip:
Believe it or not, you can make a Plus into a full-blown Internet site. Point to <http://members.aol.com/trickys/connect.html> for the lowdown.

Hardware sources

Contact several vendors when you shop, and ask about warranties and return policies, just in case. This list isn't comprehensive, but it's a good place to start:

The Computer Exchange
800-304-4639
http://www.compexch.com

DataTech Remarketing
800-281-3661
datatecrem@aol.com

GE Capital Computer Remarketing Services
800-431-7716
http://www.ge.com/capital/commequip/es

Hawke Business Systems
800-875-2610

Mac•Res•Q
510-689-9488
http://www.macresq.com

MacSale International
800-729-7031
http://www.getnet.com/macsale

Pre-Owned Electronics
800-274-5343

Shreve Systems
800-227-3971
http://www.shrevesystems.com/welcome.html

Sun Remarketing
800-821-3221
http://www.sunrem.com

Networking: AppleTalk works just fine, but if you absolutely must have Ethernet, SCSI-to-Ethernet adapters exist. They're rare, and I mean *rare*. The trick is finding one with an external power supply, because a Plus doesn't put power through the SCSI port.

Accelerators: You can speed up a Plus, but don't spend a lot of money on it, no more than $90. Some vendors, such as Brainstorm and Sonnet Technologies, offer accelerators for the SE. Sonnet's $199 Allegro SE replaces the SE's 8MHz 68000 processor with a 33MHz 68030 and gives you an expanded memory capacity of 16MB. If you spend more, you might as well buy a new, faster machine. When you call used-hardware vendors, ask about these makers (some are out of business):

Brainstorm, 415-988-2900, http://www.brainstorm.net

Dove (out of business)

MicroMac, 800-600-6227, http://www.micromac.com

Mobius, 800-662-4871, http://www.mobius.com

NewLife (out of business)

Novy Systems (out of business)

Sonnet Technologies, 800-786-6260, http://www.sonnettech.com

Fans: If you speed your Plus up, you may need to cool it down. Its failure-prone power supply will be extra stressed, so look into a used fan (Kensington, 800-535-4242, http://www.kensington.com). Do you *need* a fan? No. But for $20 or less, it might be a good investment.

What To Do About Software

System software: System 7.5.3 and 7.5.5 work fine, though not all their parts do. For example, if you install System software from another Mac and include Open Transport and QuickDraw GX, they'll vanish. Their icons become invisible. You can use a utility to make their icons visible, but they still won't work (you won't need them anyway). Use Apple's MacTCP for Net access, and it's not likely any applications that support QuickDraw GX will even run on a Plus.

You might be tempted to install an older version of the System software that requires less memory. But most of the applications you'll be running on your Plus require some flavor of System 7. The memory savings isn't worth the hassle of tracking down applications that can run under an older System.

According to Apple, System 7.5.5 is the last 68000-compatible system, but don't worry about it. Once your machine's up and running, make a pair of backups and keep them in separate places. Ten years from now that Plus will still do text and graphics.

Internet software: People all over the world have cobbled together Mac Plus Internet tools. Matti Haveri contributed to this particular list.

Connectivity: Apple's MacPPP 2.0.1 (*not* FreePPP) and MacTCP 2.0.6. Other combinations may work, but these are a sure shot.

Web: NCSA Mosaic 1.0.3 or MacWeb (shareware). No guarantees. These programs work on some machines and crash on others.

Mail: Qualcomm's Eudora or Eudora Lite, the shareware LeeMail, or the shareware Pegasus.

News: the shareware Newswatcher, any recent version (others may also work).

ftp: Fetch or Anarchie, any recent version.

AOL: Version 2.1... if you can find it. America Online isn't distributing it and is phasing out 2.1 access, so don't set up an account assuming you'll have connectivity at your fingertips. According to AOL, you won't have Net access at all.

CompuServe Information Manager: Any recent version.

Productivity software: You can perform most of the basic productivity tasks, in style, on a Mac Plus. Here are the applications that work best.

Word processing: Claris's MacWrite, T/Maker's WriteNow, ClarisWorks, Microsoft Works 3.x and Microsoft Word 5.1. Word 6 is out; it won't run on a 68000 processor.

Database: ClarisWorks.

Spreadsheet: ClarisWorks, Microsoft Excel 4.0.

Graphics: Claris's MacDraw, ClarisWorks.

Communications: The shareware Zterm and White Knight.

Utilities and tools: These tools are good ones, no matter what kind of Mac you use. Be sure to have Apple's Disk First Aid and HDSC, and Symantec's Norton Utilities 2.0.

Games: There *is* life without speedy color! The shareware Continuum and Sierra Online's Lode Runner (older versions are still shareware) are dandy twitch games, and for a slower pace, try Semicolon Software's Solitaire 'til Dawn. These and tons more are at <ftp://ftp.funet.fi/pub/mac/games>. Also check out <http://www.astro.nwu.edu/lentz/mac/recreation/classicmacgames.html>. Hey, these aren't just games lists, they're *old* games lists. Most games are 1992 and earlier, which means most are black and white, and 68000 compatible.

The Total Fee

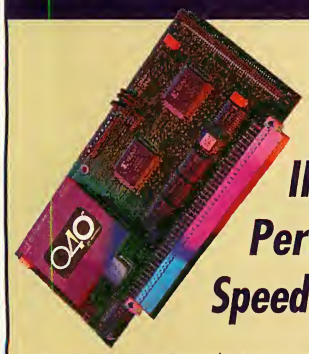
If you have a 4MB Plus aging in the closet and no other hardware, you can bring it online and have a fully functional machine—networked and printing—for about $240. That's the cost of System software, a printer, and a modem with cable.

If you need productivity tools, ClarisWorks 4.0 is the most comprehensive package and will set you back less than $90 (street price). If that's too much, Claris sells version 2.0 for only $29.

And that's all there is to it.

T. Kelley Boylan has co-authored several books and articles, and is a Mac administrator when he's not writing. He owns and uses Macs exclusively.

Run Your Mac Faster and Save!



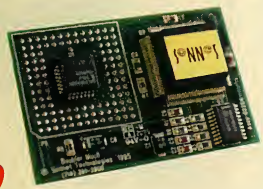
Accelerate Mac LC, LC II, Color Classic, IIci, IIsi, IIvx, or Performa 600 to '040 Speed Starting at $199

Sonnet Presto™ LC 040 50/25 MHz accelerators increase Mac LC, LC II or Color Classic performance 470% as fast as a stock machine (processor performance, MacBench2). Use RAMDoubler or Virtual Memory to break the 10MB barrier with the Presto LC (except Mac LC, OS 7.1+req'd). The Presto LC is only $199, or with hardware Floating Point Unit (FPU) $249.

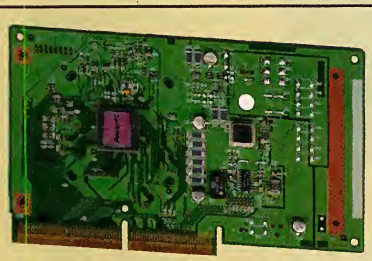
The 80/40MHz version for the Mac IIsi*, IIci, IIvx, or Performa 600 increases processor performance by 250-500%. The 80/40 MHz Presto is only $299, or with FPU and 128K level 2 cache, $399.

All Prestos are 100% application software compatible and run through System 7.5.5*. The Prestos are easy to install in the Macs' processor direct slot, and come with clear installation instructions. (*Some configurations are not compatible with RAMDoubler or Virtual Memory. Adapter req'd IIsi)

Allegro's Fast 68030s Give New Life to Mac SE, II, IIx, LC, LC II, Color Classic from $99



Give your older Mac more muscle. Sonnet Allegros™ are packed with features at bargain prices. The 33MHz Allegro LC for the Mac LC, LC II, Color Classic doubles your cpu speed, adds 16K level 2 cache and includes an FPU–all for only $149. The 33MHz Allegro SE increases performance 460%, includes an FPU and 4 SIMM slots to expand memory up to 16MB for a bargain $199. Allegro Mac II, IIx models double '030 speed to 33MHz for a mere $99.



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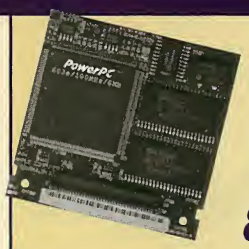

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This is the genuine Apple Computer upgrade product designed to bring your trusted PowerBook 520 or 540 into the PowerPC generation with a speedy 100MHz 603e PowerPC processor. With this upgrade you can run all native PowerPC applications the way they were meant to be. Upgrade your reliable ethernet-equipped PowerBook to PowerPC, and prepare for the MacOS future. The upgrade includes 8MB of memory and is compatible with your existing RAM expansion board. *Price after a $100 discount for trade-in of your existing 68LC040 card.

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reviews

Big, Round Numbers: Photoshop 4, FreeHand 7, PowerBook 1400, and more.

Photoshop 4.0

FREAKIN' AWESOME

SPIFFY

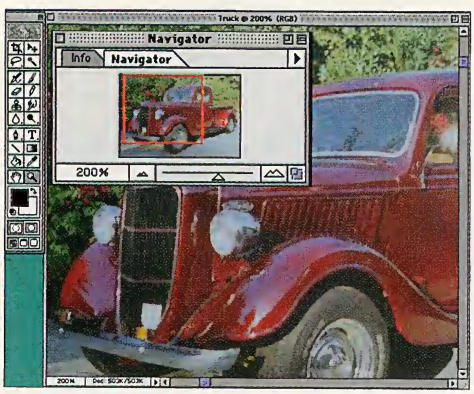
YEA, WHATEVER

BLECH!

DEVELOPER: Adobe
CONTACT: 800-492-3623; http://www.adobe.com
PRICE: $700 (street), $149 upgrade from version 3
REQUIREMENTS: 68020 or faster (68040 or PowerPC recommended), 6MB of RAM (11MB of RAM for PowerPCs), System 7.0 or later, 20MB of hard disk space for Photoshop's Virtual Memory scheme

It's been two years since Photoshop has had a major upgrade, five years since the program jumped more than half an integer. Adobe Photoshop 4.0 is in many ways the least significant major upgrade to Photoshop ever, but what has changed will dramatically improve the way you use the software.

To many users, many of Photoshop 4's strengths initially will appear to be weaknesses, managing to both disappoint and frustrate veterans of version 3.0. The toolbox has been reorganized, and along with it, the standard key commands used for manipulating selections. For example, command-Y now selects the Pencil tool rather than the Type tool, and switching between Layer and Mask for editing is now done by pressing command-backslash for the former and command-grave/tilde for the latter. Many of the tools remain the same, but in place of the old "Option-click to switch" method of changing tools in each slot, the more practical, Adobe Illustrator-like "pop-out tools" are used. Illustrator users will also find the new key commands enticing; jumping between the two programs is even easier. For instance, the command key now always accesses the Move tool (analogous to Illustrator's Selection tool). Shift always adds, Option always duplicates. The relearning curve is steep but short, and after a few hours of muttering and undoing, you'll find that the new setup is more convenient and practical. To make the transition a wee bit smoother, different cursors (which, despite their small size, accurately convey what will happen when you click/drag) appear when you hold down the different modifier keys with each tool.



THAT'S A BIG TRUCK: The Navigator palette not only helps you get around a large image (just drag the red square) but also lets you zoom in or out by moving the slider—no more going back and forth to the Zoom tool.

In addition, Adobe replaced the basic, simple, yet useful Commands palette with a much more powerful, but complex, Actions palette. In the palette you define an "action"—multiple

EVERYONE NEEDS A LITTLE ADJUSTMENT

ANOTHER ROCK: Here is a picture of a small, seemingly inert body.

DEFACING SOLAR SYSTEM PROPERTY: The "Home" layer contains scrawled words and an arrow in their actual color, above the Adjustment Layers, which have altered the planet's color. Max's face got caught below the Adjustment Layers, so he looks a little blue.

MAX PHONE HOME: So we simply drag the "Max's face" layer above the Adjustment Layer, and voilà—he is his original color again. We never had to Revert. Multiply the number of images and layers, and the value of the Adjustment Layer feature heads toward priceless.

One of the most useful additions to Photoshop 4 is Adjustment Layers. You can create, place, move, and name Adjustment Layers just as you always did with the old-fashioned layers you know and love. The difference is, Adjustment Layers act similarly to photographic filters: within an Adjustment Layer you can alter opacities, blending modes, Hue/Saturation, and anything you'd normally do with layers, affecting only those layers that lie underneath. And, if you don't like how the Adjustment Layer you've created changes a particular layer, you can simply drag that layer above the Adjustment Layer, and it is unaffected. With only a bit of planning, this feature gives you the equivalent of unlimited undos (which Photoshop 4 still doesn't offer).

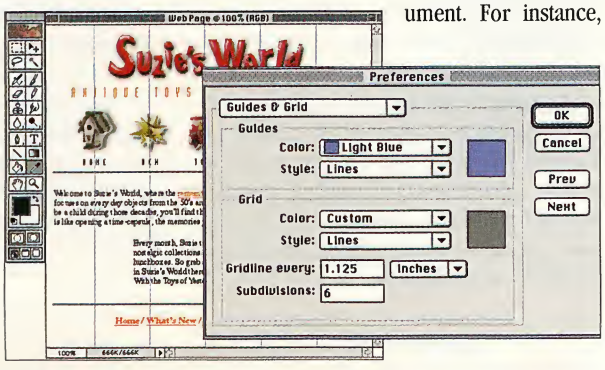
commands to be executed with one keystroke (or button push). This palette, however, isn't as intuitive or editable as most users will expect. It records most common keyboard commands and menu choices, along with dialog box settings and button pushes, but not tool usage and selections (sets of predefined actions can be found on The Disc). You can work around this, though, by inserting a stop in an action; you then select an area, and the action will continue. It's not scripting, exactly, but is terrifically useful. For example, all the steps that go into making a drop shadow can be grouped as one action. You'll still have to make a few selections during the process, but the action automates the majority of filtering, layering, and more. A Batch feature applies an action to a folder of images, but this, too, is limited. You can't automate selections or closing while in dialog boxes (when Printing, for example). Still, Photoshoppers have been waiting for even a hint of these features for a long time.

FILTERS! FILTERS! FILTERS! Photoshop 4.0 also comes with a passel of new filters, most taken from Adobe Gallery Effects. The Texture and Artistic filters may not be as immediately useful as, say, Unsharp Mask, but they do look good and require no more than a menu pulldown to run. (Clockwise) The Poster Edges filter, The Sponge filter, The Stained Glass filter, The Rough Pastels filter.

The menus also have been changed, with a brand-new Layers menu and loads of reorganizing in the others. The menus have needed an update since version 2.5, so now the changes are much more drastic than if Adobe implemented the modifications incrementally. And Adobe seems to have listened to users; many desperately needed key commands that had been "missing" from previous versions—such as Save As, Feather, Page Setup, and Paste Into—are now in place.

Adobe seems to have focused on fixing the previous version and improving existing features. New features include a unique and powerful watermark feature (see Digital Watermarks, p68), multicolor gradients, and an end to "fixed" zoom levels; version 4.0 supports zooming to such odd views as 101, 63, and 259 percent.

Power users and novices alike will love the new Layers capabilities, from the much improved redraw speeds to the literally hidden Big Data feature. Layers have always been a favorite feature, because they provide a form of unlimited undo and endless adjustment, even to saved and reopened images. Adobe has made Layers much more usable and integral to Photoshop by automatically creating new layers instead of floating selections for several activities, such as pasting and creating text. Big Data is Adobe's term for keeping all the pixels in a selection, even when those pixels move off the edge of the document. For instance, if you select all, move the selection to the left and up, and then deselect, pixels appear above and to the left of the edge of the document. Selecting that layer again and dragging down and to the right will reveal the "cropped" pixels. Previous versions of Photoshop would have lost the pixels when you deselected.



IT'S NOT PAGEMAKER, BUT... The Guides & Grids feature makes it a snap to put together images and text in alignment. For example, you could make a very large image map for a Web page.

Another powerful enhancement to Photoshop's layering scheme is Adjustment Layers, which provides a method for applying a certain image adjust feature (such as Levels, Hue and Saturation, or Curves) to one or more layers. Basically, if a layer is "below" (using the Layers palette hierarchy) an Adjustment Layer, it is affected by the changes in that Adjustment Layer. If it's above, it isn't affected. So, you're able to change aspects of different layers individually, or in groups, and if you don't like what an R-channel tweak did to the type but love what it did to the photo in another layer, it's a simple matter of dragging layers around. The wonderful thing about Adjustment Layers is that the adjustment can be modified at any time, so if you lightened an image too much with a Levels Adjustment Layer, you can double-click that Adjustment Layer and tweak the Levels settings.

FIND A SET of new Photoshop Actions on The Disc.

The most enticing new feature may be the grids and guides. Visible (on-screen only), snap-to grids can be set to custom spacing and colors, and can be pulled out from the rulers at any time. These two sorely needed features finally provide an accurate method for precision adjustments and drawing, or even layout, within Photoshop.

Another winning new feature is a little Navigator palette, similar to but better integrated than Extensis's freeware PhotoNavigator plug-in. Adobe's Navigator palette can serve as both a small preview window and a way to move around a zoomed-in document without the frustration of scroll bars or the push-push-push method of the Hand tool.

Web designers will appreciate the new integrated 216-color Web palette for exporting GIF89a images for Web pages. No longer must you cobble together browser-safe CLUTs. The palette is simple to use, too: When you convert an image to Index mode, "Web" is one of the choices.

Digital Watermarks

Photoshop 4.0 includes a filter licensed from DigiMarc that embeds digital watermarks within pixel-based images. You might think, "Gee, I don't want a watermark shadow changing the way my image looks." Well, what if that watermark were invisible to the naked eye but visible to the computer?

The watermarks created by the DigiMarc filter are almost invisible to the naked eye. If you place the original image next to the watermarked image, you might be able to tell a difference.

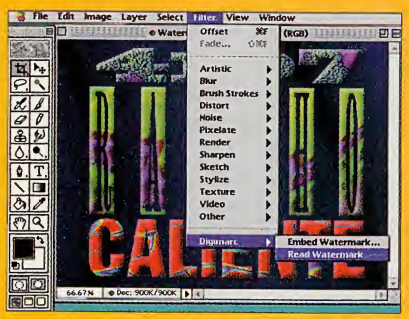
Here's how it works: You apply the watermark (with your own custom ID embedded within it) to the image in Photoshop 4.0. Say you then post the image on your Web page. A few months later you spot in some ratty publication an image that looks amazingly similar to yours. You scan it in and run the "Read Watermark" filter, and sure enough, the ratty publication used your image without your permission! Legal action ensues.

Well, maybe. The watermarks that DigiMarc creates are tough; I was able to print out a watermarked document on a black-and-white printer, scan it in again, and the watermark was still in place. However, the acts of applying a Gaussian blur, cropping away a substantial chunk of the image, or even inverting the image removed most traces of the watermark (and I got the oft-occurring message: "There's a watermark here, but it is unreadable.").

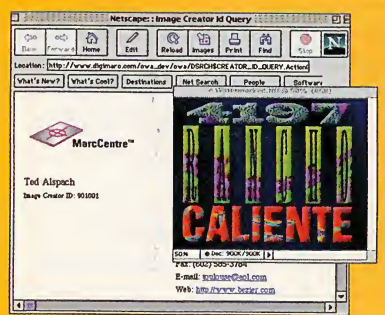
The more likely scenario ends with you getting a call (or e-mail) from someone at a reputable publication who saw your image in said ratty publication, scanned it in themselves, discovered the watermark, and wants to hire you to create more fantastic images (which, of course, will bear your watermark).

Drawbacks to digital watermarking include the fact that they work well only on continuous-tone images. Anyone who brings Adobe Illustrator or Macromedia FreeHand images into Photoshop will be disappointed, not because watermarks don't work (they do) but because they leave an unattractive "noise" residue on the image. DigiMarc currently has no plans to implement a vector-based version of its watermarking technology.

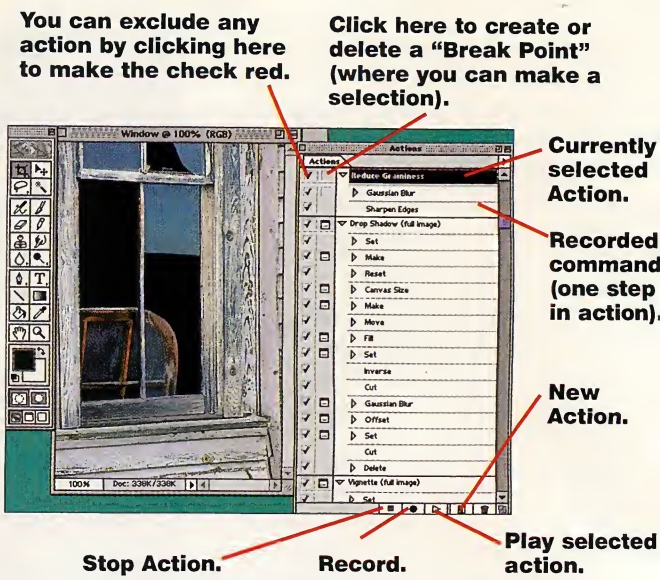
The filter comes with Photoshop at no extra charge, but the reference service will cost you. To check out the ID of the watermark and find your name and contact information, you'll have to subscribe to DigiMarc at a yearly rate of about $150. Fortunately, Photoshop 4 owners can try out the service for three months free of charge.



CHECK IT OUT: The DigiMarc filter comes with Photoshop 4.0, so it's simple to check...



THE RIGHTFUL OWNER: ... but you need a live Internet connection, and $150 a year to register. Still, this beats no evidence at all.



AAANNND, ACTION! The new Actions palette records a sequence of steps and allows you to reapply a complex procedure without going through all the steps yourself. You can even record your favorite actions and swap with friends!

Photoshop 4 also includes the recently "acquired" Aldus Gallery Effects plug-ins, giving you 48 new filters. Longtime users will see many familiar categories and several new ones, including Artistic, BrushStrokes, and Texture. Some of these filters are reminiscent of features in Fractal Design Painter; Photoshop's Stained Glass filter, for example, produces an effect analogous to Painter's Mosaic (compensating for differences in media), though Stained Glass is far easier to use.

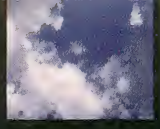
Photoshop 4 also sports a new look. Although it's got the typical "middle of the '90s" 3D gray appearance, it also has a sterile, high-tech feel. Closer inspection of the pixels reveals that the grays are lighter than the Microsoft 50 percent, and the whites are a bit dim. Even the highlights on the buttons have a subtle, professional feel, without even getting a little Kai-ried away.

Two downsides to the new Photoshop are that it isn't much faster overall (although working with multiple layers is particularly zippy), and that it still uses a zillion times more RAM than most people can afford, especially when working with large images. Photoshop still doesn't support many functions that the high-end competitors—Live Picture's self-named Live Picture and Macromedia's Xres—offer, namely multiple undos. Yes, if you want to undo more than one step in Photoshop, you still have to choose the Revert option. However, the new layering scheme results in a system that lets you undo activities by removing or editing layers, and Adjustment Layers is a virtual undo nirvana.

The bottom line is that Photoshop 4 is a very solid upgrade from version 3 that fixes many of the irregularities of previous versions. The truly new feature set is slightly weak for a full number upgrade, but the enhancements to existing features more than overcome a lack of brand-new capabilities. If you have the patience to relearn some portions of Photoshop, you'll greatly benefit from this upgrade. —*Ted Alspach*

GOOD NEWS: Radically revamped interface. Powerful Actions palette. Desperately needed grids and guides. Beefed-up layers capabilities.

BAD NEWS: Radically revamped interface. Not as much really "new" stuff as you might expect from a full number upgrade.



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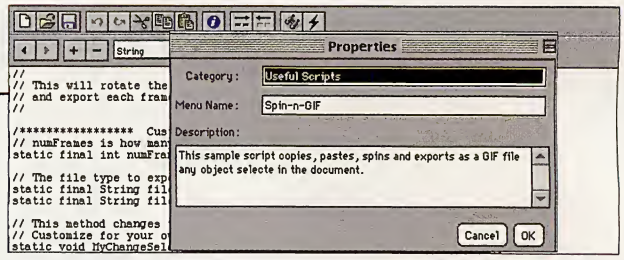
reviews

FreeHand 7

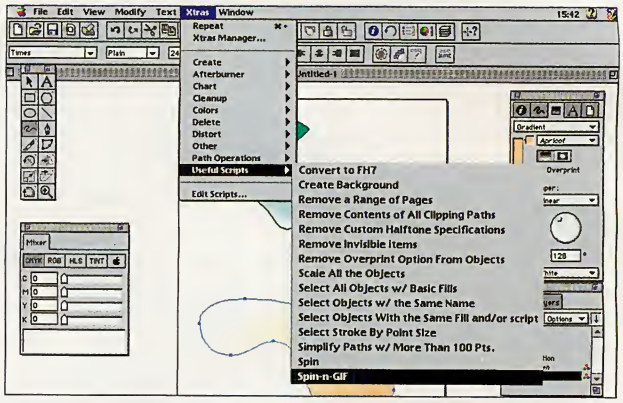
DEVELOPER: Macromedia
CONTACT: 800-326-2128; http://www.macromedia.com
PRICE: $399 (street), $149 upgrade from any previous version or competitive product, $449 for FreeHand Graphic Studio (includes Extreme 3D 2, Fontographer 4.1, xRes 3)
REQUIREMENTS: 68040 or PowerPC, 12MB of RAM, 25MB of hard disk space, CD-ROM drive, System 7 or later (PostScript-compatible printer recommended)

Anyone who is familiar with FreeHand 5 will be comfortable with FreeHand 7. (Whatever happened to FreeHand 6, anyway? Is it hiding with Elvis?) Certainly, the update offers new and interesting features: Internet capabilities, multipath blends, color autotracing, and so on. Still, the distinctions between versions 7 and 5.5 are thin.

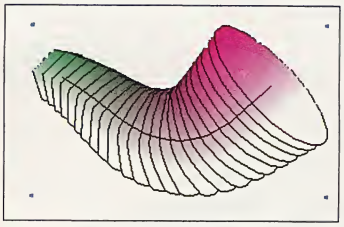
The changes that do exist will be especially useful to Web developers. For example, FreeHand incorporates Macromedia's Shockwave, so graphic artists can create interactive Web interfaces (viewable through the Shockwave plug-in for Netscape Navigator or Microsoft Internet Explorer). Vector-based graphics are a remarkably compact way of storing graphical information. A FreeHand document might be an order of magnitude smaller in size than a GIF or JPEG image, because the image's information is given in a series of equations that describe the curves, not pixel by pixel, the way a bitmap image is rendered. An immediate consequence of this approach is that Shockwaved FreeHand graphics can be viewed at any scale with equal resolution. Therefore, Net-based FreeHand documents are particularly useful for creating maps, because a user can zoom in to any area. What's even nicer about working with Shockwave is it becomes possible to assign Internet URLs to specific portions of a graphic, which makes image-map creation almost brain-dead simple.



GOT A CODE IN THE NODE: The Macromedia Script Editor (downloadable at Macromedia's Web site) comes with a bunch of useful, if arcane, Java scripts. At least a handy info box describes what each one does.



SHOW ME A SCRIPT: These Java scripts are as easy to work with as Xtras: Just copy the scripts into the Xtra folder, and they're accessible from the same menu as Xtras. Just select an object and then select the script you want to use. No code-wrangling required.



THE MOST VERSATILE BLENDER YET: you can fuse shapes and colors of multiple items, attach blend shapes, and blend between colors.

For graphic designers of any stripe, one of FreeHand's more compelling new features is the ability to make multipath gradients. In a pixel-based program such as Adobe Photoshop, gradients are easy to create, because they can be calculated quickly from surrounding pixels. In most vector-based programs, however, creating a gradient is a time-consuming process, involving dozens of intermediate steps. Creating multipath gradients (and even gradients of gradients) in FreeHand 7 is a snap (see Make Me a Star).

FreeHand 7 is better integrated with Macromedia's product line.

Make Me A Star

Here's the problem. You'd like to create a star that changes color along a path. You want to make it spiky and embellish it to make it exciting. Such a feat used to be difficult in a drawing package such as FreeHand, because you had to position each gradient by hand. Not anymore. With the multipath gradient capability of FreeHand 7, all kinds of cool effects are possible with almost no work. Three, four, or more objects can form the basis of the gradient (or morph, which in FreeHand is pretty much the same thing), but they must have the same number of points and the same general class of attributes (if one has a certain line thickness, so must the others).

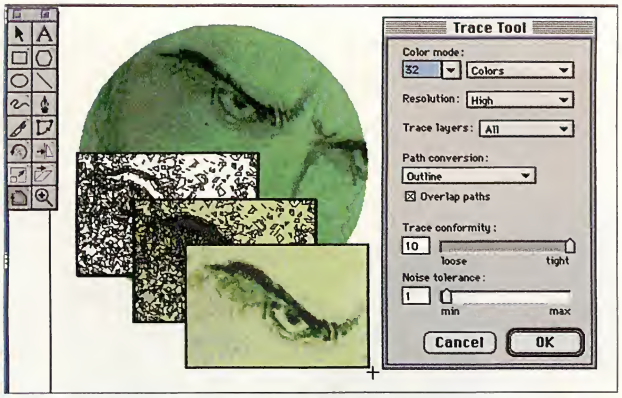
1. To make the spiked star, create a three-pronged star using the regular geometric shape.

2. Duplicate this star twice, giving the center star a blue color fill instead of red.

3. Using the Blend Xtra, blend the three stars into 22 shapes; change the density to 60 shapes—simply select the information button in the tear-off menus and change the number of shapes created to 60.

4. Once the blend is done, make a larger five-pointed star with neither a fill nor a line.

5. Selecting both the gradient and the five-pointed star, choose the function Connect Blend To Path, and the gradient will map to the path of the star to form a truly eye-popping, stellar performance.



WANT TO WORK WITH A BITMAP IMAGE AS PATH? No problem with Autotrace. It's a good idea to smooth the image colors, though you'll end up with a slew of little paths.

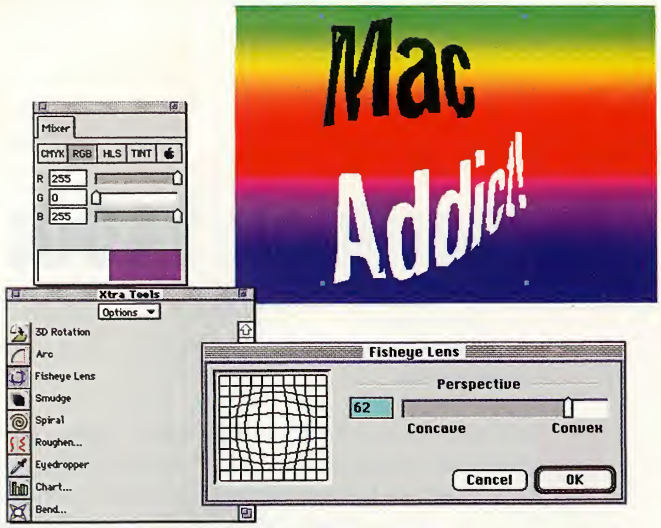
Since version 5, FreeHand has supported Xtras (Macromedia's plug-in technology, also integrated into xRes, Authorware, and Director), but version 7 sports an interface that will be familiar to users of other Macromedia programs. Adobe, with its recent Photoshop revamp, has taken the same tack. Similarly, FreeHand's interface alteration may temporarily frustrate longtime users, but in the long run, it makes complex, cross-application work much easier.

One new interface element is tear-off tabbed palettes, which have been a part of Macromedia's Extreme 3D and xRes, and presumably will be a key part of Director 6. Such tabs are a mixed blessing. You can drag one tab panel to another palette, creating custom groupings of features, but all those palettes quickly clutter up a screen. FreeHand practically demands a larger screen size in order to do anything useful. Getting the color selection window to come up and stay up was annoying. Considering how often a graphic designer needs to change colors, this is a pain.

Another of FreeHand 7's new features is color autotrace. Import an image in any one of the wide variety of raster formats that FreeHand 7 handles (Photoshop, BMPs, and the new-to-7 Net formats such as JPEG and GIF), set the degree of tolerance (which determines the number of control points), click a button, and wham!—an instant vector form of your image. The autotrace is cool, but be prepared to wait on non-PowerPC machines; tracing a complex image with more that a few colors can test the patience of a monk, and the quality isn't always as high as you'll want. The result could work well, however, if you want to produce the look of a woodcut or serigraph.

Under the "vector-nerd" category, FreeHand 7 offers a connector type of anchor point. This point, unavailable in Adobe Illustrator, makes a smooth transition between a straight path segment and a curved one, or between two curves that otherwise would meet at a sharp angle. It's a useful effect, and one that requires a lot of prestidigitation in Illustrator.

FreeHand has always been a little friendlier with other applications than Illustrator, but version 7's file importing and exporting is incredible. For starters, it can import Photoshop 3.0 files as linked resources—that is, a FreeHand file can contain an external link to a complete, layered file (as of this writing, it can't do this with native Photoshop 4 files, but an Xtra may be available in the future). This means you can work with the FreeHand document without requiring FreeHand to rotate or crop, say, a 2.5MB photo. This speeds things considerably. If you want to embed the Photoshop file within the FreeHand document, the layering information isn't available to FreeHand (in other words, it'll be a flattened file). Illustrator gives you only the latter option. Also, FreeHand exports to an astonishingly large number of formats: In addition to older formats of FreeHand, it exports to Adobe Illustrator formats (all the way back to Illustrator 88), JPEG, GIF, Photoshop EPS, PNG (the new Internet compression standard), xRes, TIFF, and Targa, among others.



XTRA, XTRA, READ ALL ABOUT IT! Plug-ins seem to be the must-have for applications today, and FreeHand comes with its own, which also work in Director, xRes, Authorware, and Extreme 3D. Trade them with your friends!

A couple of other noteworthy features are hiding within FreeHand 7, including a built-in chart maker. Anyone who has created charts in a vector-based program knows the drill—endless hours of tedium trying to get all the box heights just right, trying to get the text formatted and the data elements in properly. FreeHand charts aren't terribly flashy—most spreadsheet and database programs will create better—but a chart's components are FreeHand elements that you can manipulate. FreeHand also creates pictographs, charts in which small icons represent quantities.

The final changes to FreeHand are much more subtle but no less powerful. Macromedia worked hard to make version 7 work with AppleScript and last year unveiled a concept the company calls MCS, for Macromedia Common Scripting language. Several of the properties of FreeHand are "exposed" to outside programs—document information, methods for printing, opening and saving, user information, that sort of thing. FreeHand comes with a Java script editor that allows anyone with Java programming experience to create scripts. Once compiled, these scripts function in much the same way as Xtras: They can animate a FreeHand document (by changing the visibility of given layers over time), create a selection based on line width or other criteria, or change the position of components for export to an animated Internet GIF image. For anyone who doesn't want to program from scratch, Macromedia includes template scripts and makes others available on its Web site. Using a template isn't a totally code-less endeavor, though: To set parameters, you still need to open the script editor and enter them directly into the code. The learning curve for Java is steep, but even the simplest scripts can do incredible things.

Although the current king of vector-based graphics, Illustrator, undeniably has the numbers and a more elegant interface, FreeHand 7 is a great product and offers many specific advantages. Do you make a lot of Web graphics? Charts? Do you need the automation capability? Do you do a lot of blending in your work? If so, you may want to reconsider your illustrious relationship. —*Kurt Cagle*

GOOD NEWS: Shockwave and Internet integration. Multipath gradients are a great effect and are now easy to use. Scripting in AppleScript and Java.

BAD NEWS: Screen can get crowded. Modest revision.

reviews

PowerBook 1400c

DEVELOPER: Apple Computer
CONTACT: 408-996-1010; http://www.apple.com
PRICE: $2,499 to $3,699

When Apple released the PowerBook 5300 in 1995, what it should have released instead was the PowerBook 1400c. This little beauty has features lacking in the 5300—such as a CD-ROM drive—which, in some ways, is a shame, because if the 1400 had been released a year ago, it would have been a stand-out addition among notebook computers, PC or Mac. Even so, the 1400 is a solid machine for the price with options that users have been lusting after for some time. We tested the 1400c/117, which featured a 117MHz PowerPC 603e, 16MB of RAM, 1GB hard drive, a 6X CD-ROM drive, and an 11.3" active matrix display.

The Good

The prime amazorama feature of the 1400 is the right front peripheral bay. Mobile Mac mavens have been looking to quench their CD-ROM envy for some time, especially those who depend on their 'Books for CD-ROM presentations or want to listen to a disc while in transit. Occupying the right front bay (which also serves as a floppy drive bay or storage slot for an extra battery), the CD-ROM drive offers relief for those who want to do disc work. (The module can be purchased separately by those who initially buy their 1400 without a drive.) The CD-ROM drive, fast enough to play full-motion video, was a bit clunky when it came to closing the drive, but otherwise gave excellent performance. One power-saving tip: since the PowerBook 1400 periodically activates the CD-ROM drive to check for a disk when empty, you can save power by keeping a CD in the drive. Components are easy to swap: just put the 'Book to sleep, swap the component, and wake your Mac up. It's that simple. Third-party vendors have promised modules (such as a second hard drive, an Iomega Zip drive, or a magneto-optical drive) to fill the 1400's bay with other storage treasures.

Other nifty 1400 features include a fold-out keyboard for easy upgrading, piggyback-style memory to allow for two memory cards when expanding RAM, two Type II or one Type III PC Card slot (the TDK data/fax modem card we tried worked beautifully), and a sharp, active-matrix color display capable of thousands of colors, which is decidedly worth the extra money. The 1400's Trackpad is an improved model that offers more reliability and tap, double tap, and drag lock. These features allow you—once you get your rhythm down—to use the Trackpad as a mouse without touching the Trackpad button, and that's made a Trackpad believer out of me.

LIKE A DRIVE-IN: The active-matrix screen boosts the price on the "c" model (the "cs" has a dual-scan display), but it is lovely.

Also worth mentioning (and heaping praise on Apple for including them on the 1400) are the power supply and the fold-in door. The power supply, based on the Duo-style supply, uses an in-line transformer which only occupies one outlet on your power strip. The fold-in door, which covers the SCSI port, the ADB port, the single modem/printer serial port and the reset switch, slides under and mostly into the 1400's case, reducing the chance that a careless gesture with your multi-thousand-dollar Mac will result in that door snapping off like a rotten twig. Nifty.

The Bad

A 117MHz 603e, while not the fastest processor on God's green Earth, is still pretty snappy. That is, until it's put in the case of a 1400. Then it acts as though it's lying on a couch after it had a big lunch on a sunny, warm Friday. Theoretically, the 603e should be slightly faster than a 100MHz 601, so we pitted the 1400 against a Power Macintosh 7500/100 to see what was what. The 1400 could only muster one-quarter the speed of the 7500 on a series of 10,000 GetNextEvent calls (courtesy of Speed Tester); on the other hand, it beat the 7500 quite nicely when it came to 10,000 floating point calculations. The 1400 ran at 72 percent of the 7500's speed while doing a QuickDraw graphics test. In some more practical Photoshop tests, the PowerBook's performance was lackluster as well: it came in nearly half as fast as the 7500 when comparing an Unsharp Mask filter and a Color Halftone filter. Apple says that this speed difference

I GO TO PIECES: Though the 1400 has two docking bays, the battery (left) fills one, so it's either the CD-ROM (right) or the floppy drive—not both.

DOWN, DOWN, AND AWAY: The 1400's rear door retracts inside the case to reveal the SCSI, ADB, and serial ports.

is due, in part, to the 1400's processor not being optimized to work with the 1400's architecture. Slow bus speed and the lack of any L2 cache may also account for slow test results. At presstime, Apple was set to release a 1400 running a 133MHz 603e with 128K of L2 cache in January, so performance improvements should be in motion.

Benchmarks aside, the 1400 doesn't *feel* pokey. It feels plenty zippy when tooling around in the Finder. It handles speed-dependent applications like full-motion video with only a few dropped frames, and graphics-intensive games like MacSoft's Prime Target and Interactive Magic's Apache run nicely on this system. In short, although the 1400 doesn't run as fast as one might expect, it's still plenty speedy for most uses.

The Irritating

The PowerBook 1400 comes with an infra-red communications port on the left back panel, which, in an ideal world, allows your PowerBook to send data via AppleTalk IR to other IR devices, such as printers and other PowerBooks, without wires. It's a nice idea, but we couldn't get it to work with any other IR devices in our offices (such as an eMate or a PowerBook 190). After conducting an informal office survey, we determined that no one in human history has ever used an IR port successfully. The PowerBook would probably be better off without it.

The 1400 ships with System 7.5.3, an unavoidable situation because of the speed with which both the PowerBook and System 7.5.5 were developed. Adventurous spirits that we are, we tried to install System 7.5.5 on the PowerBook 1400, even though that system hasn't been tested on the new 'Book. The result? We couldn't install 7.5.5. Period.

Other niggling 1400 irritations include a BookCover latch that sometimes comes undone when opening the 1400, one serial port (instead of two), and backlighting that isn't directly controllable á la the PowerBook 170. Really, though, these bits are not deal killers when it comes to purchasing Apple's latest and greatest.

The PowerBook 1400 is a fine Macintosh. It's expandable, it has a CD-ROM drive, the nickel-metal-hydride battery still lasts two to four hours (not great, but not terrible) and that large screen is downright beautiful. While the 1400 won't set any speed records, it will do everything you need it to do, provided you aren't a graphics design professional looking to use a PowerBook as your primary Mac. For those who have been waiting for the Volvo of mobile computing, wait no more. The PowerBook 1400 has arrived.—*David Reynolds*

GOOD NEWS: CD-ROM drive option. Large 11.3" display. BookCovers. Easy upgrading.
BAD NEWS: Slower-than-expected response. Lackluster processor speed. Funky BookCover latch.

BAD Day On The WEB

?

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reviews

Avid Cinema 1.0

DEVELOPER: Apple Computer
CONTACT: 408-996-1010; http://www.apple.com
PRICE: $459 (srp)
REQUIREMENTS: Any PCI PowerPC Performa equipped with Apple Video System or any PCI AV Power Mac, 16MB of RAM, 1GB hard disk, System 7.5.3 or later, QuickTime 2.5, camcorder or VCR (recommended: 24MB of RAM, 2GB hard drive; S-Video, digital camcorder, or VCR)

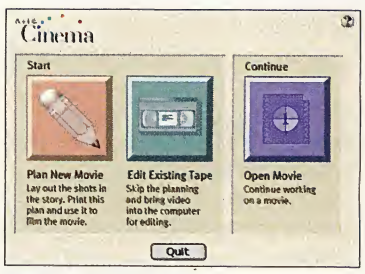
Americans shoot billions of feet of home video each year, and hardly any of it is edited. Calculate the number of valuable hours wasted fast-forwarding through endless footage of babies drooling, kids mugging, Gen-Xers slacking, and wedding guests staggering and you'll see why Apple and Avid have a winner in Avid Cinema, the first truly easy-to-use digital video-editing solution for ordinary, home moviemakers.

Avid Cinema (developed by Avid, but offered exclusively through Apple) is a combination hardware/software product. The software helps you capture and export the video, and offers an editing interface; the hardware is a 7-inch PCI video digitizer card that fits in all PCI Macs and supplies RCA composite (standard video) and S-Video out jacks. To use Avid Cinema with a Performa, you'll also need the Apple Video System ($109), a separate board with video-in and audio-in jacks that plugs into the Performa's video slot. Some newer Performas, such as the 6400, include both Avid Cinema and the AVS. AV Power Macs with integrated video in—including the 7500, 7600, and 8500—don't need the AVS.

In all, the hardware does an impressive job of simplifying video hookup. Your Mac becomes just another video peripheral: simply connect a camcorder to the input jacks, a VCR into the output jacks, and run video right through the system.

The Avid Cinema board offers hardware compression/decompression for Motion-JPEG. Ideally, you can grab and play back 30 frames-per-second, 320 x 240-pixel video, which can be bumped up via an interpolation scheme to a full-screen 640 x 480 pixels. You probably won't get all 30 frames per second in or out unless your Mac runs at 180MHz or better, and you've tuned your system to maximize video throughput by quitting all other open programs, turning off file sharing, disabling extensions that do things in the background (such as RAMDoubler or Virtual Memory, for example), and making sure there's plenty of free RAM available. The interpolated full-screen output looks surprisingly good—like a second-generation VHS recording.

SMILE! Grabbing video via the Avid Cinema hardware is easier than with any other video board we've used, and we've used a bunch.



SMELLS LIKE AT EASE: Avid Cinema's opening screen. For some, freedom of choice is not a good thing.

GET IT OUT OF HERE: Avid Cinema asks you where the movie's going, and creates a tiny, ultra-compressed movie.

It's the editing software that provides the real ease-of-use kick. Avid Cinema boils down the moviemaking process to just four steps: working with a storyboard, bringing video in, editing the movie, and sending the movie out.

To begin, you pick a storyboard template. Templates for common life-cycle experiences—from birthday to vacation to wedding, as well as school and office events—make it relatively simple to organize your raw material. The templates are relentlessly conventional and narrow-minded, as are the event choices—how come there's a "Christmas Holiday" storyboard, but no Kwanzaa or Hanukkah?—but this is the feature that may well be the most

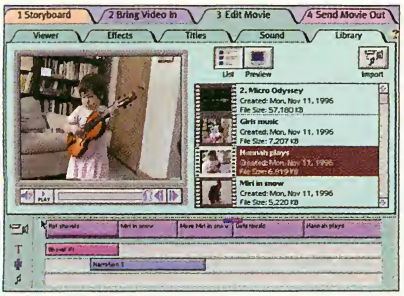
Tricks 'n' Tips Q & A

Q. Planning to use one of the canned storyboards?
A. Print it out beforehand and take it with you to the event. It'll help you organize your shots and make sure you don't miss anything.

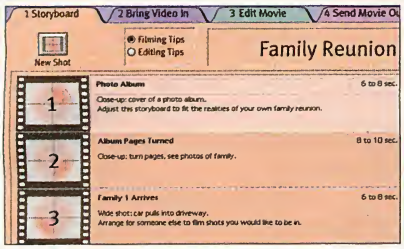
Q. Do your Avid Cinema movies play in stutter-rama?
A. One way to dodge the dropped-frame problem is by lowering your disk cache. Here's how:
1. Choose the Memory control panel from Control Panels in the Apple menu.
2. Change the Disk Cache size to 96K. Close the window to save the change.
3. Restart.

Q. How do I play movies?
A. Avid Cinema movies are not self-contained movies, like most other QuickTime movies. The saved movie contains references to the original clips stored in the Media folder, so don't throw that out until you know you're done with the project. To make a self-contained Avid Cinema movie:
1. Choose the Send Movie Out tab.
2. Select Internet, CD-ROM, or Presentation movie, depending on your needs.
3. Save the movie under a different name.

Q. Want movies on your home page to download automatically for users of Netscape 3.0 and compatibles?
A. Add the suffix ".mov" to the name of your movie BEFORE uploading it to the network. This works with any QuickTime movie.



YO! YO! MAMA: The timeline at bottom is where you piece together the movie. A limited number of tracks keeps things simple.



TYPICAL DIRECTOR: Two dozen storyboards step you through typical productions, but flexibility is limited.

popular with folks who just want to get their videos made without reinventing the cinematic narrative basics.

The next step is to grab the video footage, which is straightforward enough, as long as you have enough hard disk space to store it all; a finished 10-minute video occupies about 500MB. The third step, editing the movie, takes place in a stripped-down, four-track, editing timeline that is reminiscent of an ancestral version of Adobe Premiere. This is where you piece together the clips according to the storyboard, adding music, narration, titles, and some basic transitional effects such as wipes and dissolves. Finally, you dump the finished product to tape, CD-ROM, or a standalone QuickTime movie.

Avid Cinema's tabbed interface, simplified feature set, extensive support for drag-and-drop, and quick response makes movie production about as easy as it can be. Even newbies will be able to rough out most productions in less than an hour. The product is pitched particularly well to kids who want to hone their Spielberg talents—in fact, Apple's first public demo of Avid Cinema was conducted by a 9-year-old.

The flip side of this extreme ease-of-use is that Avid Cinema is a poor choice for serious moviemaking and learning about moviemaking. Among its many, many shortcomings as a professional tool: you can't add additional video, audio, or effects tracks for multilayered movies; it's not compatible with Adobe Premiere plug-ins or Adobe Photoshop filters, so wild special effects aren't possible; you can't apply custom compression settings to your movies; there's no external device control for automatically starting and stopping a camcorder; SMPTE time code, the industry-standard method of numbering and tracking video frames, isn't supported; the storyboard templates aren't really suitable for business or creative needs; and the video quality, while excellent for a less than-$500 product, doesn't meet industrial, much less pro, standards. Anyone with artistic or professional ambitions should look at packages from miro, Radius, or Truevision instead.

Does that mean Avid Cinema is the training wheels without the bike? Only if you're a video snob who can't stand the idea that people might want a simple, foolproof, and unpretentious way to edit their movies. Videoheads beware—Avid Cinema is digital video for the rest of us. —*Steven Anzovin*

GOOD NEWS: Easy-as-pie video capture, editing, and output.
BAD NEWS: Ambitious moviemakers will chafe at severely limited options. Not currently expandable.

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Mac ADDICT

reviews

CometPage

DEVELOPER: Digital Comet
CONTACT: http://www.digitalcomet.com
PRICE: CometPage $89; CometSite $149
REQUIREMENTS: System 7.5, MacTCP or OpenTransport, 1MB of free RAM

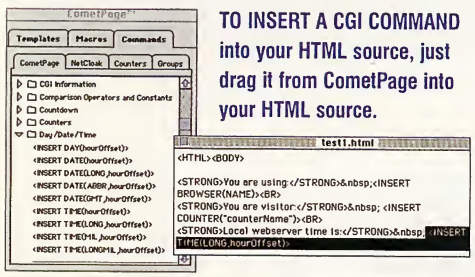
CGI scripting isn't for the faint of heart. There's little charm to the long hours of keyboard-banging usually required for to create just one CGI program. However, Digital Comet makes CGI a drag-and-drop affair with CometPage and CometSite.

CGI programs on a Web server add functionality to Web sites—you might see the result as a hit counter or dynamically generated pages. Usually CGI programs are written in Perl, C++, or AppleScript, and must be compiled to work on a particular computer platform.

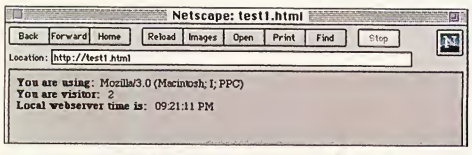
CometPage lets its users build and test a Web site—even a very complicated site—locally. It includes support for templates and macros to automate much of the drudgery associated with HTML. Changing the contents of a macro will apply those changes automatically to every page containing the macro, eliminating hours of work. And even an HTML novice will be able to use the custom tags in CometPage to produce CGI-esque behaviors. Additionally, CometPage includes Web server capabilities and can be set to accept HTTP requests from your IP address only (the default setting), or from as many as 50 concurrent outside Web connections.

CometSite is a CGI program that supports the dynamic publishing functions of CometPage, but extends those functions to many top Web server programs and platforms. It is available for the Mac-based WebStar, as well as for various UNIX and Windows NT platforms, including an NSAPI plug-in for Netscape's Commerce and Enterprise servers, an ISAPI module for Microsoft's Internet Information Server, and an Apache module. If your Internet service provider uses CometSite, you can take advantage of CometPage's many features, which will work on the Internet exactly as they do when viewed locally with CometPage.

The first thing you'll see upon launching CometPage is a window with three index tabs: Templates, Macros, and Commands. In the space below these tabs is a listing of pseudo-folders and pseudo-files. If the Commands tab is selected, you'll then see an additional four index tabs above the folders and files, showing four different CGI functionalities: CometPage, NetCloak (CometPage duplicates much of the functionality of its closest competitor), Counters, and Groups. The pseudo-files under the Commands tab are instructions that can be interpreted as CGI functions by a server running CometSite.

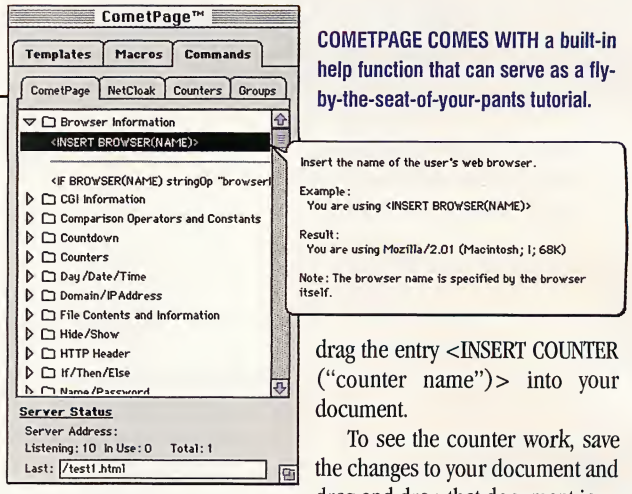


TO INSERT A CGI COMMAND into your HTML source, just drag it from CometPage into your HTML source.



WHEN YOU'RE SATISFIED with your HTML source, view it in your browser of choice.

Inserting an access counter instruction, for example, from CometPage into an HTML document, is a four-step affair: First, click on the Commands tab; then click on the CometPage tab; open the pseudo folder called Counters; then drag the entry <INSERT COUNTER ("counter name")> into your document.



COMETPAGE COMES WITH a built-in help function that can serve as a fly-by-the-seat-of-your-pants tutorial.

To see the counter work, save the changes to your document and drag and drop that document icon onto CometSite. CometSite will then do a couple of things. It will launch your choice of either Netscape Navigator or Microsoft Internet Explorer, activate the Web server feature of CometPage, and serve that newly augmented HTML file to your browser window, where you will then see a page with a very simple access counter. (In this case, the access counter isn't based on GIF images, so it doesn't look like an odometer or a calculator display. It's just plain old text.)

The good news is CometPage does a lot more than just count hits. Through dynamic tagging, it provides login and password control for a site, echo back the current date and time, echo back the browser type of the site's viewer, insert other documents into your HTML document on the fly, tell your surfers where they were before they came to your page, automatically redirect surfers to other pages, echo back the current URL and/or the latest modification date, and more. You can configure your site to deliver different documents depending on the time of day or the day of the week, or even to change a particular document when, say, a contest entry deadline passes. All in all, there are 85 dynamic tags in 17 categories.

For those with WebStar access, CometSite is a dream come true. Two minutes in the WebStar Admin program provides permanent use of all the CometPage tools. For those without WebStar, CometPage can be used as its own Web server, although that's not its primary function.

On the other hand, if you're without CometSite, CometPage has a "Publish Site" feature, which enables you to build a site with the Comet macros and a subset of the 85 dynamic commands, and then "publish" or "flatten" the site before FTPing up to the (CometSite less) server. Functionality is limited, of course, but nothing catastrophic results (no broken links, for example).

Of course there are limitations. You can bask in CometPage drag and drop glory 'til the cows come home, but without CometSite it's all for naught—unless you're content with CometPage's 50 concurrent connection ceiling. Real CGI programmers will always have more versatility and flexibility. But what these programs offer in exchange for their limitations is a ridiculously easy, almost instant CGI gratification. *—Gary Barker*

GOOD NEWS: Drag and Drop CGI. Powerful and easy to use. Includes server software.
BAD NEWS: Few ISPs run CometSite.

Dancer 1.0

DEVELOPER: Paceworks
CONTACT: 415-855-0900; http://www.paceworks.com
PRICE: $445 (srp)
REQUIREMENTS: 68040 or PowerPC, 5MB of application RAM, System 7.5 or later, QuickTime 2.0 or later, Colorsync 2.0, QuickDraw GX 1.0 or later or the GXGraphics INIT QuickDraw GX Library (recommended: PowerPC, 16MB of RAM, CD-ROM drive, clip-art collection, Java-compatible Web software)

VALUABLE REAL ESTATE: Dancer is a Web-oriented animation tool with powerful timing features and a lot of small controls.

The frantic race to deliver a killer 2D animation application that will do for the Web what Macromedia Director did for CD-ROM makes it an interesting time for animators. Latest in the increasingly crowded field of Web-minded animation tools is Paceworks's Dancer.

At first glance, Dancer looks like other 2D animation programs. There's a composition window for (go on, guess) composing visual elements and editing motion paths; a multitrack timeline (the Synchro window) for adjusting the timing of objects, sounds, and motions; and a media window (the Hub), which shows all the animation's elements and their attributes, plus available libraries. Dancer is a key frame animator: to make an animation, import an object (a PICT file, GX text or graphics, QuickTime movie, etc.) into the Compo window, move the time in the Synchro window to set a new key frame, move the object in the Compo window, move the current time to set the next key frame, move or change the object, and so on.

Dancer has some unique twists that make animation easier. You can save an object and its "dance"—the time-based parameters attached to an object—in libraries for reuse. This is a real timesaver. Dances created for one object can be drag and dropped onto many other objects, allowing you to craft complex animations (birds in flight, fish swimming) with minimal effort.

Dancer also knows that animators spend a lot of time making a series of movements start and end at the same time. The Time Alignment box provides tools for aligning key frames and locking the timing of one object to all objects. There's nothing like this in any other animation program.

In fact, there are so many powerful features in Dancer that the designers have had trouble fitting them all on the screen. The density of controls and indicators, some of which are hidden until you click on the right spot, makes Dancer's interface not only hard on the eyes but harder to use than it needs to be.

Another problematic aspect of Dancer is that it requires either a full install of QuickDraw GX—not an option for people with limited RAM and hard disk space—or the GXGraphics INIT, a library of GX graphics routines. Extension problems become apparent before you start working with Dancer. Ready to convert all your Type 1 fonts to TrueType? You'll have to, because the GXGraphics INIT recognizes only TrueType. It is fanatically picky about corrupted fonts, and it disables desktop printing, too. (Apple may have fixed some of these problems by the time you read this.)

As an animation tool, Dancer positions itself against Director, a matchup between apples and oranges. Director began life as an animation program, but it's now a tool for creating interactivity. Dancer has no interactive component. A better comparison is between Dancer and After Effects ($995). Dancer's time-sync tools are more streamlined, plus it directly generates GIF89 and Java animations. However, for twice the price, After Effects has more than twice the functionality: It does almost everything that Dancer can do, plus layers, Adobe Photoshop and Premiere plug-in support, and special effects, such as motion blur.

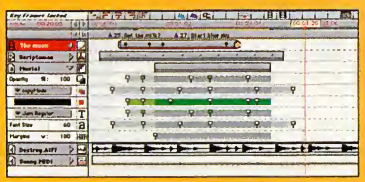
If cash counts and your primary task is Web animation—specifically, animated Web ads—Dancer will do the job, and then some. Just make those widgets bigger, please.—*Steven Anzovin*

GOOD NEWS: Good news: Powerful 2D-key frame animation. Unique time-alignment tools. Makes Java animations. Needs no special playback plug-in for Web publishing.
BAD NEWS: Complexity means long learning curve. Requires troublesome QuickDraw GX extension. Tiny screen elements cause eyestrain.

On Tippy Toes

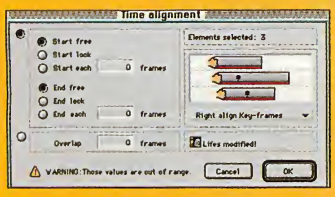
Mastering all of Dancer's elements is no easy task. Here's a quick guide to the basics:

1. Visuals are arranged in the Compo window. Import elements, or drag and drop them from libraries or the desktop. Motion paths, such as that of the moon object, are editable Bézier curves. Hold down the Option key and click on that path to add a control point for editing.



2. The Synchro window is Dancer's animation spreadsheet. Objects and sounds are listed at left. Timing bars at right can be dragged, stretched, and squashed to set start and end points. Icons along the top jump to the Time Alignment box.

3. The Hub provides access to libraries of objects and dances. It also shows detailed attribute information about any object selected in the Compo or Synchro windows.



4. Use the Time Alignment box to align object motions and other time-variable parameters—it's like setting margins, tabs, and justification in a page-layout program.

Interactive Physics 3.0

DEVELOPER: Knowledge Revolution
CONTACT: 800-766-6615; http://www.krev.com
PRICE: $249 for single user; $995 for Lab Pack of 10; site license available
REQUIREMENTS: 68K or Power Mac, System 7.1 or later, 8MB of RAM, 8MB of hard disk space

FIND A DEMO of Interactive Physics on The Disc.

Physics is fun. Okay, for those of you still reading, let's look at Interactive Physics 3.0, the latest upgrade of this classroom physics simulator. Ever wondered what it would look like if those intricate spring/lever/pulley/cannon diagrams your high school teacher drew on the chalkboard came to life? Or what if you moved that there, or connected these here? Or if it all happened on the Moon? Here's your chance to find out.

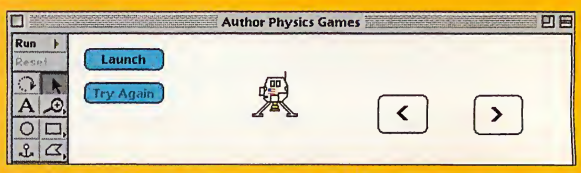
Knowledge Revolution has been making motion simulation software since 1988, for both educators and engineers. And with Interactive Physics 3.0, a lot's been done to bridge the gap between their lab- and school-based applications: the real-time, editable physical models in this educational product would have been available only on workstations just a few years ago. The interface is admirably Mac-like, with a tools palette immediately comprehensible to anyone who's worked with any Mac graphics program from Apple's MacPaint to Adobe Illustrator. We were making worlds of bouncing balls and cannon shots within minutes. Despite the simplicity of the interface, though, Interactive Physics can be used to create terribly sophisticated sims with powerful data input and export.

Opening the application gives you an untitled window that contains the stage or "world" you'll be creating and, oddly, the tools palette (that is, each new world carries its own identical palette, rather than letting one float separately). You can begin building elements right away, though it's probably a good idea to begin with a "Table" (i.e., a rectangular shape) and anchor it in place with the Anchor tool: Interactive Physics's worlds are infinite, with no default "bottom." From the table you can create any manner of machine with rectangular or circular elements, polygonal or curved bodies, pin joints, rigid joints, slots and slot joints, rods, pulleys, gears, ropes, motors, actuators, dampers, and three kinds of springs. It's a do-it-yourselfer's heaven.

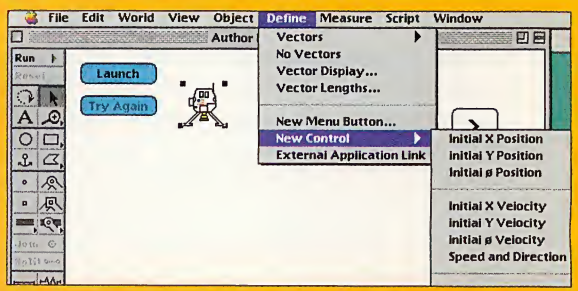
With Version 3, Interactive Physics adds a bunch of features that make life easier than it was in Version 2.5. "Object Snap," for example, makes it, well, a snap to attach joints at precise points of two rods, or a rope to the center of mass of a ball to make a pendulum. Previously, these were iffy propositions, and frustrating. Another rectification of old annoyances is that now you can resize and reshape an object while it is joined to another; in Version 2.5, if you were assembling a machine, and found that the last side didn't quite reach the first, you had to disconnect all the sides, resize, and reconnect. Now, it's just a matter of dragging the shape of the object, much as one would resize a window.

Initial conditions and properties of bodies are also easily set. To give a ball an initial velocity, for example, just drag the cursor from the center of the ball, and a vector, which is resizable and redirectable, will appear. Properties of an object, such as elasticity, can be accessed by double-clicking that object, and then set (materials range from

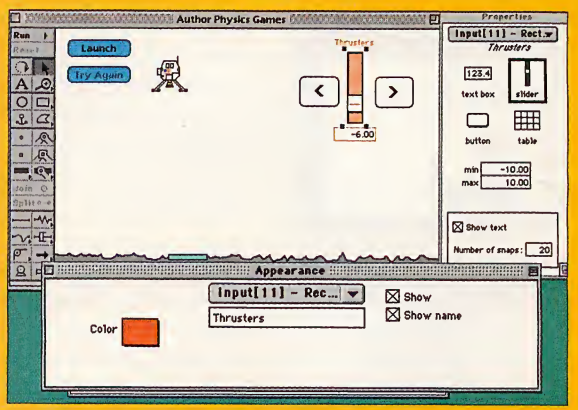
TAKING AND MAKING CONTROL



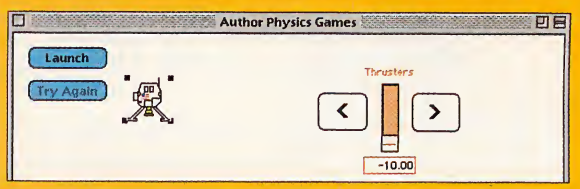
STEP 1: The point of this sim/game is to land the Lander on the Pad. Previous controls for sideways thrust are already there, but we need another control for the landing engines.



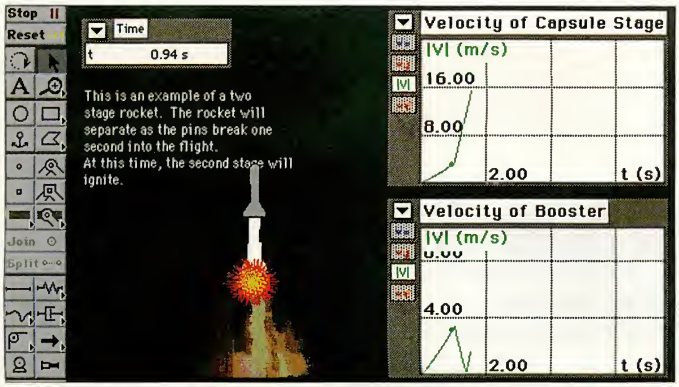
STEP 2: To make a new control for the Lander, select it with the mouse, and under the Define menu, choose your New Control, and select the parameter.



STEP 3: In the Properties window you can choose type of Control, go to the Windows menu and call up the Appearance window which allows you to change the name and color of your control.



STEP 4: Once you've tweaked the conditions to just where you want them, go to the Edit menu and select Player Mode. Now you can distribute your game without fear of student... um... embellishment.



IT'S "TO GO BOLDLY, DAMMIT!" The sims can get sophisticated quickly. Good thing data can be displayed and collected into exportable charts and graphs.

stone to ice to rubber, and the mass, static and kinetic frictions, elasticity, and charge can be typed in). One feature we'd like to see is a global replacement function for conditions and properties; as it stands, to scale all the velocities in a world or to change everything to stone, you have to select each individually and replace. Once the sim is built, you can type titles or crude call-outs into the world; however, there's not a lot of space for your words, and your layout options are severely limited. If you're tired of looking at the default grey graphics, Interactive Physics allows you to color bodies and paste onto them, though no amount of tweaking gave us a look that was anything but flat.

Interactive Physics's new Player Mode allows you to create a sim and distribute it without the ability to edit it. This will probably be a big attraction to teachers: a student can interact with a sim via controls the teacher creates and defines, but can't mess it up. Teachers can create the conditions of a specific experiment and let students explore certain aspects—for example, setting up a spring with two blocks attached, giving the students control over spring rates and masses but not gravity or number of springs. In fact, Interactive Physics comes with a set of pre-made sims, and Knowledge Revolution has created sim sets for many of the major physics textbooks.

Perhaps the most powerful feature of Interactive Physics is that models can be linked to data from a Microsoft Excel or Claris Filemaker data file, so that the sim, while running, will use data from those files to alter input parameters. Imagine having 20 students run their own experiments (in the real world), collect the data into a spreadsheet, and then have the whole class see how each experiment differed. On the other end, Interactive Physics can save data from a sim as a tab-delimited file, so that students could run their own virtual experiments and then incorporate their findings into a report. Also (and this is neat), you can save your sim as a QuickTime movie to show off, even cross-platform. Be careful, though: these movies can run into the dozens of megabytes very quickly.

Overall, this is an outstanding package. The price is high for a single user, though with an excellent Apple Guide help system and tutorial, Interactive Physics plus a textbook could be a viable education in itself. The learning curve for some of the more advanced features is steep, but anybody can get going easily. Wish I'd had this in high school. *—D.D. Turner*

GOOD NEWS: Very powerful physics simulator. Fairly simple to use. Flexible. Good Mac-like toolbars and palettes. Can import and export data several ways.

BAD NEWS: Flat, unexciting graphics.

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★★★★½ Strategy Plus Magazine, Nov '96

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MacAddict, Nov '96

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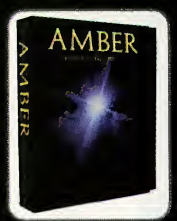

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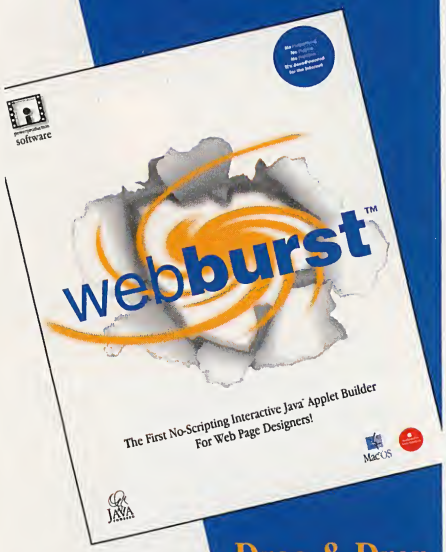

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WildRiver SSK 1.0

DEVELOPER: DataStream Imaging Systems
CONTACT: 606-255-6686; http://www.datastrem.com
PRICE: $99.95 (srp)
REQUIREMENTS: Adobe Photoshop 3.0 or 4.0 or an application that supports Photoshop 3-compatible filters (Fractal Design Painter, Adobe PhotoDeluxe, Adobe Illustrator, etc.), 68040 or better, System 7.1 or later

FIND A DEMO of WildRiver SSK on The Disc.

Few Photoshop plug-in sets are actually full of great plug-ins. Most collections contain several mediocre filters and one or two standouts. True to form, Data-Stream's WildRiver SSK 1.0 has MagicMask, which by itself is worth the price of the package.

THAT'S NOT A BLOB, THAT'S A BUTTON: The interface is alien, but MagicMask is far easier to use than multiple channel operations.

WildRiver SSK contains seven filters, each using a wild and colorful interface. MagicMask, the star of the package, creates bevels, embosses, highlights, and shadows in tons of combinations. MagicMask bases the effect on the current selection's edges. The effects range from Satin to Metallic to Plasma, and there are plenty of ways to customize the effects. In addition to creating some really stellar effects, MagicMask contains a preview window (indispensable for complex effects) and handy visual fixed presets.

The only other filter in the set that offers previews is Chameleon, which replaces a range of color in an image with another, newly defined range of color. Chameleon isn't totally useful, however, for slight retoning and color correction (which is what most people would want to use this filter for), because the preview window isn't sensitive enough to display such slight, incremental changes.

The unique TileMaker filter, which divides the selected area into small tiles, is intriguing and fun. The TVSnow filter gives images the look that makes television viewers with a rural antenna cringe. MagicFrame creates gradient-based frames, and MagicCurtain creates gradients; but both filters suffer from a lack of direct control, and their results look all too similar. Finally, DekoBoko is an embossing tool for rectangular selections that provides a few effects beyond the norm.

All the filters save presets, a godsend considering the confusing plethora of pop-up menus, sliders, and buttons and the lack of their consistent placement. (To help you, WildRiver SSK includes a Hints box at the bottom of the MagicMask filter's box that offers hints about how to achieve different effects. Also, each filter has an online Helper, accessible by clicking on a stylized question mark).

Control over effects is limited in several ways, from the eight preset lighting effects angles to the inability to compress or stretch color bands within the Frame and Curtain dialog boxes. Some keyboard commands follow Photoshop standards, such as command-J for switching the float of a selection, but others, such as command-F, which in WildRiver SSK applies a filter again, do not.

MagicMask is definitely worth using on a regular basis, as it creates effects previously obtained only by complex channel operations (be sure to try using the filter on only one color channel of an image). Most of the other filters duplicate similar or better-implemented effects in other packages, so if you've already made a hefty investment in PhotoTools or Kai's collections, the WildRiver SSK set may be redundant. However, if you're starting out in the stuff-the-filters-folder game, you won't be unhappy with any of this group's parts, and definitely happy with a few. —*Ted Alspach*

GOOD NEWS: MagicMask provides fantastic, easy-to-use effects.
BAD NEWS: Most of the remaining filters are just so-so. Interface can be a bit disorienting.

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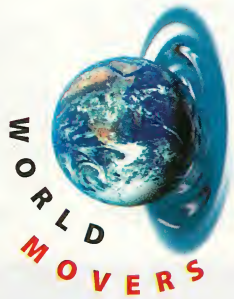

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reviews

Abuse/Blackthorne

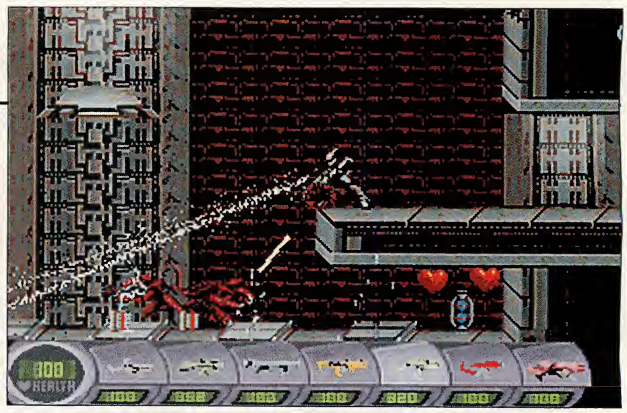
Abuse

DEVELOPER: Bungie
CONTACT: 800-295-0060; http://www.bungie.com
PRICE: $37.95 (street)
REQUIREMENTS: 68040 or PowerPC, 6MB of free RAM, 17MB of hard disk space, System 7.1 or later

Blackthorne

DEVELOPER: MacPlay
CONTACT: 800-4MACPLAY; http://www.macplay.com
PRICE: $27.95 (street)
REQUIREMENTS: 68040 or faster, 3MB of free RAM (6MB recommended), 4MB of hard disk space, System 7.0 or later

FIND THE DEMO of Abuse on The Disc.



ABUSE THOSE MUTANTS BELOW. If they hurt you, just grab the hearts (health points) after you kill them.

It's rare for Mac gamers to get a chance to play side-scrollers and even rarer for two such games to be released in the same month. But it happened late last year with Bungie's Abuse and MacPlay's Blackthorne. The two the games have little else in common.

Abuse is pure action. You're dropped into mutant hell. Your job is to shoot all the mutants blah blah blah before they yada yada yada so you can blah blah blah. Once you're playing the game, the plot really doesn't matter, except to prepare you for bizarre-looking bad guys.

The real object is to collect bigger and badder weapons so you can off bigger and badder enemies. You start with a puny laser gun and work your way up to a Death Saber, with a few projectile weapons thrown in for laughs. You need those weapons to face weirder and tougher mutants as you progress. You encounter a few puzzle elements, such as switches, along the way, and you must watch your health points, but overall Abuse encourages you to kill, kill, kill.

Abuse's interface harks back to the good old days of Delta Tao's

KILL THAT WHAR'ORK: in Blackthorne, leap onto the ledge, lob a hover bomb, and avoid his whip.

Dark Castle—it uses both the keyboard *and* the mouse. Steer with one hand and aim and kill with the other (a setup that's familiar to Mac users). Games aren't saved in the standard Mac way, however. You save your game at a control panel in one of five slots. Abuse saves a snapshot of where you were, along with the level number. When you die, the game returns you to your last saved game. Of course, once you're back in, you can't stop. One final tip: Don't choose the darkest gray (as it asks you to) on startup—you'll want the game brighter so you can see more of it. We had a blast playing this game (though setting up a network game on our local network was problematic) and found it difficult to stop playing once we got going.

Developed by Blizzard before it started publishing it own titles, Blackthorne was released by Interplay (MacPlay's parent company) almost two years ago on the PC. You are Kyle Blackthorne, a mercenary soldier in Africa; no, wait, you're Kyle, son of King Vlaros of Tuul, hidden away among the Earthlings until old enough to fight the evil Sarlac. Whatever.

As Blackthorne, you must shoot your way through many levels to defeat the evil wizard and free the enslaved Androthi. Unlike when playing Abuse, your finger is not on the trigger at all times. You must also jump, climb, and use objects such as healing potions, bombs, and bridge keys while avoiding traps. This makes for a less immersive experience than Abuse, because you must pause to figure out how to get around obstacles—in Abuse you just keep going and going.

Blackthorne makes up for low-level immersion with high-level character development. You interact with the imprisoned Androthi, who provides clues about what to do on the level. Your inventory is more extensive than just a variety of guns. You learn more about the world as you progress. You must wield the power of the Lightstone against the Darkstone. But...

The game feels much more like a console game than a Mac game—and not a 32-bit console game at that. The graphics are chunky, and the font looks as if it came from your cable TV preview channel. Instead of saving your game, you get a password after completing a level. And processor counts. We do not recommend playing this game on an '040 Mac. Kyle seems to move in slow motion when he should be running.

Nonetheless, we had fun playing the game. If you have a PowerPC and don't mind a game engine that feels old, Blackthorne is a fun, if frustrating, game. —*Kathy Tafel*

Abuse

GOOD NEWS: Better graphics than Blackthorne. Highly addictive. Responsive gameplay on '040 Macs. Networkable.

BAD NEWS: Saved games blend together. Installs on only your System Folder drive.

Blackthorne

GOOD NEWS: Good deal for the money. Better plot than Abuse.

BAD NEWS: State of the art—two years ago. Slower than molasses on '040 machines.

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-USA TODAY

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When Tex is hired to find the statuette he plunges into a labyrinth of deceit, manipulation and murder. He'll need all of his PI instincts and every ounce of Murphy savoir faire to resist the seduction of darkness and stop the forces of evil—before the terrifying prophecies become reality.

Under A Killing Moon stars Brian Keith (*Hardcastle & McCormick, The Parent Trap*), Margot Kidder (*Superman I, II, III*), Russell Means (*The Last of the Mohicans, Natural Born Killers*), and features the voice of James Earl Jones (*Star Wars, Field of Dreams, The Lion King*).

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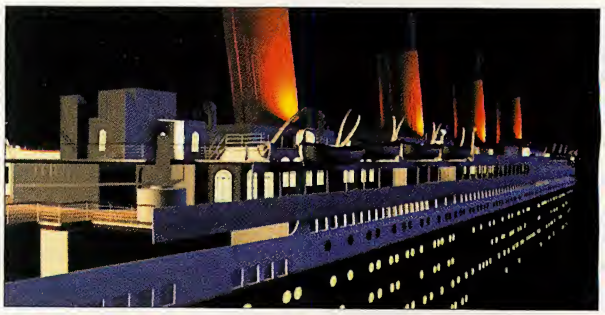
reviews

Titanic: Adventure Out of Time

DEVELOPER: GTE Entertainment/CyberFlix
CONTACT: 619–431–8801; http://www.im.gte.com/titanic or http://www.cyberflix.com
PRICE: $59.95 (srp)
REQUIREMENTS: System 7.1 or later, 68040 or faster, 8MB of RAM, 256 colors, 2X or faster CD-ROM, external speakers.

Titanic: Adventure Out of Time is one of the the best Myst-like mystery/suspense games released in the past year. You are a British secret agent on a mission as you move through a stunning (and historically accurate) 3D-recreation of the ill-fated R.M.S. Titanic. Your top secret mission is to recover a priceless book, trade it for secret documents, then get into a lifeboat and escape before the ship sinks from its iceberg encounter.



A REALLY BIG SHIP: The Titanic as it appears in the cinematic opening.

You'll also become entangled in one or more subplots involving a Russian double agent, a diamond necklace and its fake replacement, and an unscrupulous steel baron. The storyline and subplots are in the best secret agent tradition. And Titanic includes several interesting puzzles based on the technology of the day, such as the steam engine and wireless telegraph.

SO SENSITIVE: what you say to her could make or break your case.

The game interface is simple and familiar. The arrow keys are your feet and the cursor changes into a hand whenever it's over an object that you can pick up or manipulate, or when it's over a character you can interact with. A helpful direction indicator glows green when you can move forward and red when you can't. A detailed map of the ship's eight decks provides guidance and a helpful "jump-to" feature lets you move around the ship quickly.

The first half of the game is event based—you explore the ship, figuring out who knows what and what to do next. In this phase, you interact with more than 25 crew members and passengers at your own pace. Each character has a distinct personality and responds differently, depending on what statement you select from the pre-scripted menus.

And then there's the iceberg: Now, the game turns into an action thriller in real time. The clock is ticking and you must resolve your dilemmas before the ship sinks in just two and a half hours (the real Titanic's sink time).

The ship's recreation is stunning, the characters are diverse and interesting, and the plots, subplots, and puzzles mesh well with the setting and characters. So what's missing? A better help system. You could wander the ship for hours without any action. Although Smethells, your steward, occasionally provides hints and tips, he rarely offers specific advice. And the puzzles are too easy; the solutions are almost always close at hand.

Nits aside, Titanic is a spectacular, creative adventure. Repeat play is also enjoyable; characters may respond differently, affecting how you reach the end, if not the end itself. Even you're not a mystery/adventure game-fan, Titanic may well be worth buying for the guided tours. —*Bob LeVitus*

GOOD NEWS: Gorgeous. Epic story with interesting characters and subplots. Lots of spiffy places to explore.
BAD NEWS: No hints or help to speak of. Puzzles too easy for most gamers.

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Close Combat 54877 **$38**

Microsoft

JOURNEY TO LIFE: Covers the entire process of human development from sperm & egg production to the actual birth of a new baby. Contains the latest scientific information available.

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34994 **$95**

BLINKY BILL'S GHOST CAVE *by Dream Catcher*
Filled with over 150 surprise animations & numerous educational games and puzzles kids will love.
54905 **$25**

TRIG EXPLORER *by Cognitive Technologies*
An in-depth study of trigonometry fundamentals. Great explorations of Algebra, Geometry & Science.
55427 **$36**

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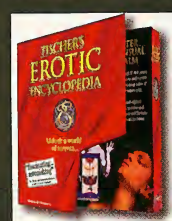
Includes: Home inventory, Tax Guidebook, Tradeline Stock Guide, Quicken Quotes, 101 Tips & Tricks for Quicken Users
54340 **$64**

INSIDE THE SAT & ACT '97 *by Princeton Review*
Answer the challenge of the new Marathon adventure–"Blood Tides of Lh'Owon." 30 levels with new textures, landscapes & monsters.
53103 **$26**

SPORTSTER 28.8 VOICE FAXMODEM *by US Robotics*
Now one compact easy to use solution lets Mac users manage voicemail, faxes & data transmissions. Duplex speakerphone capability, message retrieval & more.
50763 **$189**



FISCHER'S EROTIC ENCYCLOPEDIA *by Dream Catcher*
Brings together over 1000 pictures & movies representing 3,700 years of erotic history. Filled with fascinating information.
52694 **$39**

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51559

YOUR CHOICE $36

ABUSE
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cd-roms

ORIGAMI ■ WILLIAMS-SONOMA GUIDE TO GOOD COOKING ■ HERBIE HANCOCK LIVING JAZZ ■ SOLAR SYSTEM ■ HOLIDAY CELEBRATIONS

If the winter blues have got you down and you're looking for some indoor distractions to pass the time, this month's CD-ROM selections will soon have you cooking, folding, and grooving the days away. Two digital cookbooks, a guide to origami (paper included), a way-happening welcome to the world of jazz, and a less-than-stellar space title will take you into Spring—for better or worse. Read on to find out which one is which. —*Joe Mahr*

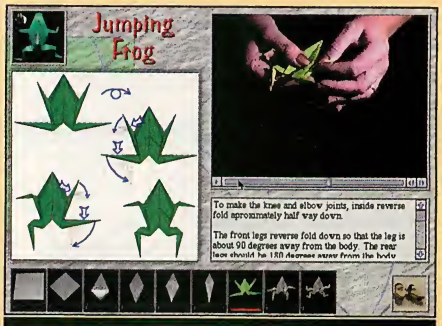
Origami: The Secret Life of Paper

PUBLISHER: Casady & Greene
CONTACT: 800-359-4920;
http://www.casadyg.com
PRICE: $59.95 (srp)
REQUIREMENTS: 2X CD-ROM,
System 7.0 or later, 68030 or better, 8MB of RAM

Think origami and you may recall the Little Caesar's commercial in which the nerdy pizza clerk folds a box into a giant squawking crane. Although the art of paper folding has been popular in Japan for centuries, it has not become a serious mainstream pastime in the West. Until now. If you can make it past a slightly confusing interface, Casady & Greene's new CD-ROM will have you turning your Wrigley wrappers into art in no time.

Instead of using text and complicated diagrams, this title provides QuickTime movies to show you simple projects in easy-to-follow, step-by-step tutorials. But then the bug strikes. You can't stop pinching up paper. Soon you're folding your mother's will into a bird.

Once you're committed to the asylum, you'll have plenty of time to check out the disc's extensive history of the art, along with a collection of biographies on select origami artists. Don't worry if you quickly use up all of the pretty paper that comes packaged with the disc—simple recipes help mix up new supplies out of junk mail and water.



ORIGAMI HOW-TO KIT folds up mini masterpieces.

The Last Words:

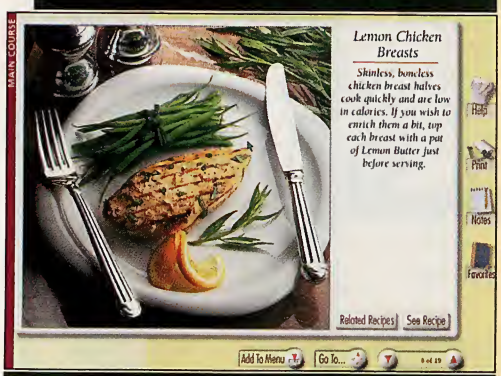
Mark: Finally, a disc that gets everything right. Most of this month's other CD-ROMs are superficial snacks, but the Secret Life of Paper is a five-course feast.

Judy: Other than the QuickTime movies and the room-to-room navigation, this CD-ROM displays only basic scrolling text and very little navigational assistance.

Joe: If you like folding paper, this is the disc for you. Sixty bucks buys a lot of practice paper.

Williams-Sonoma Guide to Good Cooking

PUBLISHER: Brøderbund Software
CONTACT: 415-382-4700;
http://www.broderbund.com
PRICE: $39 (street)
REQUIREMENTS: 2X CD-ROM,
System 7.1 or later, Power Macintosh, 12MB of RAM



FEAST YOUR EYES on a delicious digital cookbook.

A cookbook on CD-ROM? No doubt some half-hearted collection of bad recipes lost in a maze of "multimedia," you think. Well, think again. This culinary delight will leave you begging for seconds.

This disc finally satisfies our craving for an easy-to-access CD-ROM. Tracking down a particular recipe is as simple as looking up an ingredient or settling on a cooking time.

Hungry for a pizza, but you don't like anchovies? Punch your demands into a simple form and up pops a list of yummy recipes. Stuck living the low-fat nightmare on a fast-food schedule? In a few seconds you learn there are two dishes with less than 1 gram of saturated fat (the really, really evil stuff) that you can make in a half-hour or less.

An illustrated, animated glossary tops off the vast database of 1,000 tantalizing recipes. When directions call for sautéing, click on the term and a QuickTime movie will show you how it's done. ("The vegetables should literally jump around the pan," explains a pleasant voice.) Once you know what you're doing, it's a breeze to print out your shopping list and get cooking.

The Last Words:

Mark: Gosh darn it, it's cute. Nonetheless, my girlfriend would never forgive me if I gave top marks to a recipe book that doesn't tell you anything about the historical and cultural context of the food.

Judy: I'll admit it: I am a foodie. And this CD does my passion justice.

Joe: Eureka! I made a pizza, and it didn't taste too bad! Of course, I haven't tried all the recipes yet...

Herbie Hancock Presents Living Jazz

PUBLISHER: Graphix Zone
CONTACT: 800-828-3838; http://www.gzone.com
PRICE: $39.95 (srp)
REQUIREMENTS: 2X CD-ROM, System 7.1 or later, 68040 or better, 8MB of RAM

You can be hip to the beat, Daddy-o, so long as your groove-thing doesn't mind looking for the funk in this disc's navigational jungle.

Living Jazz has it all. Start off with a panoramic tour of New Orleans, the birthplace of jazz. While you're there, saunter into a bordello to hear how jazz became house entertainment in the city's red-light district before it was closed down by the government.

TOE-TAPPING TITLE will jazz up your Mac.

Or cruise to Chicago or New York and learn why jazz became the cultural icon of the World War years. When your toes get tired of tapping, wrap up your tour in Hermosa Beach, California, at just about the time jazz enthusiasts traded in their straight-laced suits for turtlenecks and sports coats with elbow patches.

Living Jazz shows off the people, places, and music of the jazz community with enough pictures and QuickTime recordings to satisfy those urges, baby. However, finding your way around the disc may leave many a hep cat shaving their goatee in frustration.

The Last Words:

Mark: This CD has its rough spots-balky performance, a somewhat obtuse interface-but these flaws are more than made up for by its sheer exuberance.

Judy: Locations, sights, and hot spots should be labeled as your cursor passes over them. But once discoveries are made, the information and sounds are fantastic.

Joe: Herbie Hancock gets a little annoying with his pronouncements on jazz. But, hey, as the great ones say, you've just got to shake them bad vibes, baby.

Solar System Explorer

PUBLISHER: Maris Multimedia
CONTACT: 800-33-MAXIS; http://www.maxis.com
PRICE: $45.95 (street)
REQUIREMENTS: 2X CD-ROM, System 7.0 or later, 68040 or better, 8MB of RAM

Where are Scotty and Spock when you need them? This clunker of a spacecraft could use some enterprising minds to rediscover the unusable interface and jumpstart its sloooow performance.

Don't get us wrong, it's a nice concept. You're the captain of a ship that cruises around space, exploring planets and far-out attractions found only in the solar system. While you're flying, you can check out the library for info on planets or visit the museum for history on other voyages. And (surprise) there's a Web site to visit for the latest on space issues, such as life on Mars.

FORGET "STAR TREK." Think "Lost in Space."

It all sounds so fascinating. Too bad that getting any kind of response from the disc takes longer than it does for Captain Kirk to spit out a sentence. By the time you actually track down any useful space facts from this disc, you'll probably be able to shuttle directly to the planet and see it for yourself.

The Last Words:

Mark: My brain hurts. Although I had the manual at hand every step of the way, I felt like I was trying to fly to Mars with thick mittens, rotten eyesight, chronic motion sickness, and an IQ of 15.

Judy: I found, by accident, info on a spacesuit, but darned if I could find it again, even after repeatedly searching and searching and searching...

Joe: Scientists had a nice idea, but disc makers screwed it up. Better luck next time.

Better Homes and Gardens Holiday Celebrations

PUBLISHER: Multicom Publishing
CONTACT: 800-850-7272; http://www.multicom.com
PRICE: $24.95 (street)
REQUIREMENTS: 2X CD-ROM, System 7.1 or better, 68030 or better, 8MB of RAM

Catch up to the latest Christmas cross-stitches while brushing up on your favorite Yuletide truffle recipe. (Insert fake smile.) And if you're lucky, maybe, just maybe, you'll find some holiday inspiration somewhere in this disc. We sure didn't.

All Martha Stewart jokes aside, the disc, which comes bundled with a 140-page book (the most appealing ingredient in this foul holiday concoction), reeked of quick and dirty production. Although the book is nicely split between Christmas and non-holiday cookie recipes, the disc includes a paltry half-dozen Christmas cookie how-to's. And not only do the featured entrees look waxy and distasteful, but you'd find more holiday meal variety in a high school cafeteria.

The title's lone redeeming value is the unintentionally humorous QuickTime movies that show you how to make a selection of low-rent crafts. The highlight has to be the floating walnut shell candles, which you're supposed to literally light then toss in a bucket. You can just imagine a perky housewife sweetly prodding firefighters to keep their hoses off the carpet. Gag.

CHEESY CRAFTS are recipe for disaster.

The Last Words:

Mark: I'm no candidate for Martha Stewart-hood, but the relentless perkiness and white-bread aesthetics of this disc absolutely gave me hives.

Judy: From the echoey welcome to the floating walnut shells, there just isn't a whole lot here to make you cheer.

Joe: At least making the disc kept some cutesy-fake kitchen nuts busy for a while, so they couldn't mess with too many other people's lives.

Kidz Stuff

Brisbane Elementary School Mac Addicts sound off on the latest kids' software.

FIND DEMOS of Elroy's Costume Closet, Just Me and My Mom, Mega Math Blaster, and Pajama Sam on The Disc.

Just Me and My Mom

PUBLISHER: GT Interactive
CONTACT: 800-610-4847; http://www.gtinteractive.com
PRICE: $37 (srp)
REQUIREMENTS: 2X CD-ROM, System 7.1 or later, 68040 or faster, 8MB of RAM

Mercer Mayer's hanging spiders, pet frogs, and mysterious monsters come to life as Little Critter's trip to the city turns into an animated adventure. Kids can either have the story read aloud or explore at their own pace. The charming cast of clickables found on each page keeps kids working the mouse to find the silly surprises, such as rapping dinos and farting squids, that seem to lurk on every page.

GOOD FOR GRADES: Pre-school to 3
LIKES: "It is very information filled. By information filled, I mean in the museum they tell you about all of the exhibits." ■ **Hilary**

"I like this software because the things that you click on do something that is usually interesting." ■ **Katie**
DISLIKES: "When you clicked on Play, it would play the story non-stop." ■ **Holly**

"It was slow when I wanted to go to the next page, and I did not like all the corny jokes." ■ **Paul**
SOUND ADVICE: "I would make him go more places. It would be more fun." ■ **Rebecca**
FINAL REPORT: Cute critters play up their animal magnetism.

CUTE CRITTERS are the key to this city trip.

Meet the players...

EMILY HANDA, Age 10, Grade 5
EXPERTISE: Sports
PICK OF THE MONTH: Pajama Sam in "No Need to Hide When It's Dark Outside"

HOLLY MILLER, AGE 10, Grade 5
EXPERTISE: Soccer
PICK OF THE MONTH: Pajama Sam in "No Need to Hide When It's Dark Outside"

KATIE TWOMEY, Age 10, Grade 5
EXPERTISE: Art and science
PICK OF THE MONTH: Pajama Sam in "No Need to Hide When It's Dark Outside"

DANIEL LAM, Age 10, Grade 5
EXPERTISE: Spelling
PICK OF THE MONTH: Pajama Sam in "No Need to Hide When It's Dark Outside"

PAUL JIMENEZ, Age 10, Grade 5
EXPERTISE: Art
PICK OF THE MONTH: Pajama Sam in "No Need to Hide When It's Dark Outside"

HILARY WALDO, Age 9, Grade 5
EXPERTISE: Soccer
PICK OF THE MONTH: Pajama Sam in "No Need to Hide When It's Dark Outside"

REBECCA WALDO, Age 9, Grade 5
EXPERTISE: Theater
PICK OF THE MONTH: Pajama Sam in "No Need to Hide When It's Dark Outside"

ERIC GRIFFIN, Age 10, Grade 5
EXPERTISE: Sports
PICK OF THE MONTH: Mega Math Blaster

Elroy's Costume Closet

PUBLISHER: Headbone Interactive
CONTACT: 800-267-4709; http://headbone.com
PRICE: $19.95 (street)
REQUIREMENTS: 2X CD-ROM, System 7 or later, 25MHz 68040 or faster, 8MB of RAM

Elroy and his best friend, Syd, don more than one hat (as well as a slew of matching costumes) as they take to the stage for their theatrical debuts. In this digital version of dress-up, you get to pick out the young stars' clothes as they powder up in their dressing rooms backstage. Pick out the correct clothing combinations and Elroy and Syd will put on a show. If you just can't find anything to wear, you can always download more costumes from the Headbone Web site.

STICK TO THE DRESS CODE for a star performance.

GOOD FOR GRADES: Preschool to 5
LIKES: "I like the part where you dress Elroy and Syd and then put them on the stage." ■ **Daniel**

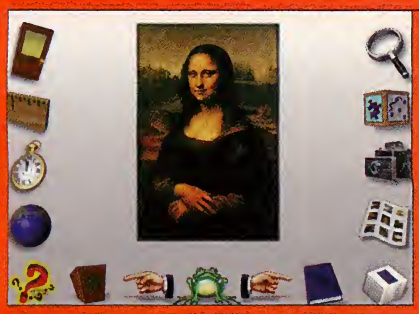
"The end plays are funny, and I like the costumes." ■ **Rebecca**

"The reason I like this software so much is because I like picking out other people's clothes." ■ **Katie**
DISLIKES: "I didn't like that Elroy and Syd looked so much alike under the costumes." ■ **Eric**

"They had only three characters, and there was not a lot to do. I liked everything else." ■ **Hilary**
SOUND ADVICE: "I would change it so you can mix up the costumes and they would still put on a show." ■ **Paul**
FINAL REPORT: Elroy and Syd are dressed for success.

The Louvre Museum

PUBLISHER: Voyager
CONTACT: 800-446-2001; http://www.voyagerco.com
PRICE: $39.95 (srp)
REQUIREMENTS: 2X CD-ROM, System 7 or later, 33MHz 68040 or faster, 8MB of RAM



SLOW-PACED MULTIMEDIA MUSEUM tour plays more like a still life.

Voyager's tired tour of France's most sacred museum will have most kids heading to the exit before they even make it to the Mona Lisa. Lame games, dry-as-dust narration, and tons of text amount to little more than a sleepy art-history slide show. Although the title treats kids to a sweeping collection of historical masterpieces from world-famous artists, most kids are still too young to appreciate art for art's sake. Now, if it came bundled with chocolate mousse...

GOOD FOR GRADES: 3 and up
LIKES: "I like the pictures and the puzzles. I also like how it shows you when the picture was drawn." ■ **Emily**

"I liked that some of the puzzles you could do were dot-to-dot." ■ **Eric**

DISLIKES: "It's kind of boring because you just click on arrows and play little games." ■ **Daniel**

"The tour was too long and the scrapbook was too little." ■ **Paul**

"It got sort of boring. There was not a lot to do. The voices and music were dull." ■ **Hilary**

SOUND ADVICE: "I would make more puzzles." ■ **Rebecca**

FINAL REPORT: Kids would rather not suffer for their art.

Where in the U.S.A. is Carmen Sandiego?

PUBLISHER: Brøderbund Software
CONTACT: 800-521-6263; http://www.broderbund.com/carmen
PRICE: $39 (street)
REQUIREMENTS: 2X CD-ROM, System 7.0.1 or later, 20MHz 68040 or faster, 8MB of RAM (12MB for Power Macintosh)

Get ready, gumshoes, Carmen Sandiego and her light-fingered friends have gone on yet another stealing spree. Decipher clues and interrogate suspects as you trail the villains across 50 states and stop them from stealing America's treasures. Clueless crime-stoppers can call up an ACME Good Guide to get a fact-filled tour of an area, or they can click on the ACME database to view each state's permanent rap sheets, which include information on geography, history, economy, people, sites, and landmarks.

GOOD FOR GRADES: 4 and up
LIKES: "I like this software because there are mind-challenging activities." ■ **Katie**

"I liked going to different states, collecting clues, and trying to catch Carmen." ■ **Holly**

"It's fun! It's challenging! There are so many possible suspects!" ■ **Rebecca**

DISLIKES: "It was kind of confusing to understand what you had to do in the first game. There are only three people in each state." ■ **Hilary**

"I didn't like how the warrants looked so unreal and lined." ■ **Eric**

SOUND ADVICE: "It's good already, but maybe we could go to any state when we travel." ■ **Daniel**

FINAL REPORT: Crime-solvers crack up over geography.

TRAINED SLEUTHS CLUE IN to the geography of the U.S.A. today.

Pajama Sam in "No Need to Hide When It's Dark Outside"

PUBLISHER: Humongous Entertainment
CONTACT: 800-499-8386; http://www.humongous.com
PRICE: $39.95 (srp)
REQUIREMENTS: 2X CD-ROM, System 7.0 or later, 25MHz 68040 or faster, 8MB of RAM

In an epic struggle to conquer his fears and sleep with the lights off, Pajama Sam embarks on a quest to track down Darkness and restrict the evil-doer to the close confines of a lunchbox. But soon after Sam crosses into the Land of Darkness (via his closet), the Customs Trees snatch away his Darkness-nabbing supplies. Using teamwork and problem-solving skills, the young hero must search out his stuff (along with several feet's worth of missing socks) before he can face Darkness. However, by the time he's finished his quest, he already has.

SWEET DREAMS are made of cool games like these.

GOOD FOR GRADES: 3 and up
LIKES: "I like the graphics in this because it's almost like you're right there. Also, I like Darkness's house." ■ **Emily**

"The game is challenging and not boring. A wide variety of ages will love this game." ■ **Hilary**

"I like this software because all of the characters have different personalities, like Sam-he acts all brave, and then he gets scared." ■ **Katie**

DISLIKES: "It's hard to find all the stuff you need in his room, and this game is pretty hard." ■ **Daniel**

"It got confusing at times! It does not tell you where that much stuff is!" ■ **Rebecca**

SOUND ADVICE: "I would make an overhead view of the Land of Darkness so kids could know where to go." ■ **Eric**

FINAL REPORT: A game most kids would lose sleep over.

Math Heads

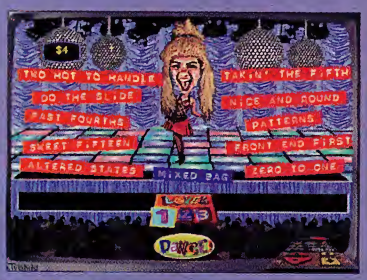
PUBLISHER: Theatrix
CONTACT: 800-955-TRIX; http://www.theatrix.com
PRICE: $29.95 (srp)
REQUIREMENTS: 2X CD-ROM, System 7.1 or later, 68030 or faster, 8MB of RAM

PBS meets MTV in this season's premiere of Math Heads, a CD-ROM game that disguises fractions and pre-algebra as a fast-paced lineup of infomercials, game shows, and music videos. Theatrix tunes kids into Math Head TV through seven educational channels that math addicts can flip through via a splashy remote control interface. Start off by, literally, getting a head, then try to win enough cash to buy the flashlight of your dreams from the Go Shopping channel.

GOOD FOR GRADES: 5 and up

LIKES: "They have an information channel where you can learn math tricks. The math is challenging." ■ **Hilary**

"I liked making the people because you can make them look silly, goofy, nice, or anything like that!" ■ **Katie**



GLITZY math keeps you glued to the tube.

DISLIKES: "Lower the price of the shopping channel stuff, like the couch and the flashlight. The flashlight is like $59." ■ **Daniel**

SOUND ADVICE: "I would make more channels. There could also be some easier games." ■ **Rebecca**

FINAL REPORT: Growing up with cable makes seven channels seem skimpy.

Mega Math Blaster

PUBLISHER: Davidson & Associates
CONTACT: 800-545-7677; http://www.davd.com
PRICE: $45 (street)
REQUIREMENTS: 2X CD-ROM, System 7.5 or later, Power Macintosh only, 8MB of RAM

Gelator, the brain-draining baddie, is up to no good. Now he has kidnapped Blasternaut and Galactic Commander's esteemed colleague Spot, and you must solve several levels of arcade-style math games to bail out their buddy. You'll shoot down asteroids and avoid electrifying bombs as you solve math problems ranging in difficulty from adding up digits to figuring out fractions. A space saga that spans two discs, Mega Math Blaster offers enough levels of math mastery to keep kids of all ages engrossed in calculating gameplay.

GOOD FOR GRADES: 1 to 5

LIKES: "It teaches a lot of math. You can play it if you're young or old." ■ **Rebecca**

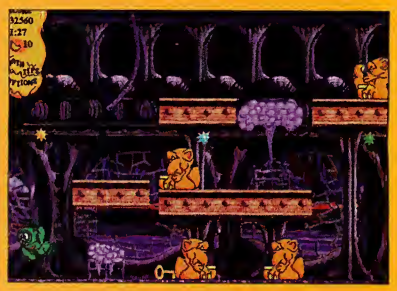
"I liked that there was a hard, medium, and easy level." ■ **Eric**

"It was cool when you got to fly the spaceship." ■ **Paul**

DISLIKES: "I don't like it when you are timed. I always lose because of time, and it's hard to pause the game." ■ **Daniel**

SOUND ADVICE: "You should change the way they give you instructions. There should be more characters. Everything else is cool!" ■ **Hilary**

FINAL REPORT: Arcade-style math equals hours of edutainment.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Print Paks Make Your Own Book Kit

PUBLISHER: Print Paks
CONTACT: 800-774-6860; http://www.printpaks.com
PRICE: $24.99 (street)
REQUIREMENTS: 2X CD-ROM, System 7.1 or later, 68020 or better, 8MB of RAM, printer

Max, the arts and crafts hound, is back in business as the friendly instructor of yet another how-to kit from Print Paks. Unlike most build-a-book software programs, this kit actually comes with the paper, cover stock, buttons, and binding material necessary to turn a selection of templates into a real-life page-flipper. Kids can choose to create a storybook, scrapbook, activity book, or a combination of all three by mixing, matching, and decorating the predesigned templates.

GOOD FOR GRADES: 3 and up

LIKES: "There were good colors and easy instructions." ■ **Hilary**

"You could easily make a book, like a space story or an adventure and a lot more." ■ **Daniel**

DISLIKES: "I really didn't dislike anything, but it wasn't the best software." ■ **Eric**

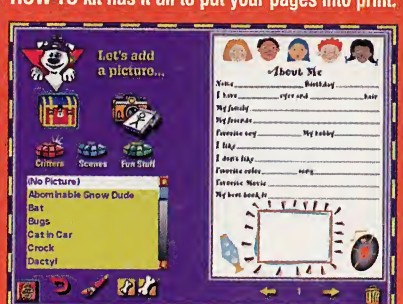
"I don't like that when you try to vacuum up one thing, it vacuums up everything." ■ **Paul**

"I did not like the dog that keeps talking, nor his long things to tell you." ■ **Emily**

SOUND ADVICE: "Make a place in the program where you could draw your own picture." ■ **Daniel**

FINAL REPORT: Crafty concept lacks software sizzle.

HOW-TO kit has it all to put your pages into print.



What Katie Thought

Nikki Echler is on vacation this month, so this section was written by Katie Twomey, one of the Brisbane Elementary School reviewers. Katie decided to dedicate her column to the Comfy Activity Center ($129 srp, 800-99-COMFY), which works strictly with its own software and was designed for use by toddlers. The activity center ships with two software titles; most additional titles sell for about $29 (srp). Upon finishing her review, Katie donated the keyboard to her school's special-education class for use by children with Down's syndrome.

My Review
By Katie Twomey

Things that I liked about this keyboard:

1) I liked the way it is so strong.
2) The software for it is great.
3) Kids keep hooked on it.
4) The makers did a really good job on graphics.
5) The characters are nicely animated.
6) It is also interesting for ages over 4.
7) I like the way you are able to call some characters.
8) It has different languages.

Things I did not like about this keyboard:
I liked everything!

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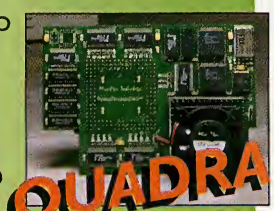

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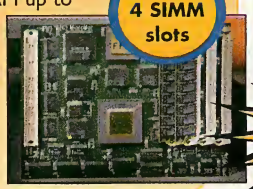

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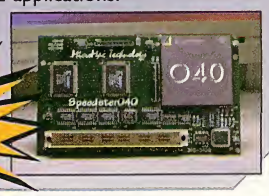

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how to fix bad scans

Moiré patterns, interpolation, optical resolution? It's all easier than it sounds.

A flatbed scanner can serve so many purposes you'll wonder how you ever managed without one. Until, of course, you run into one of those "problem" scans. Then you'll wonder why you ever bought the thing in the first darn place. The best way to avoid problem scans is to do a little planning before your scanning.

Problem scans often fall into some pretty distinct categories:

1. Huge File-itis
2. Itty-bitty Originals
3. Cruddy Color
4. That's a Moiré
5. Muddy Line Art

Most of these problems can be corrected in a variety of ways, but without a doubt the single, most-effective tool to correct all of them, as well as tackle a whole slew of more-esoteric problems and objectives, is Adobe Photoshop. If you don't already have Photoshop and you're contemplating buying a scanner, then go for the scanner/software bundle that includes it. If you've already bought a scanner and it didn't come with Photoshop, then get it. Using your scanner without this essential software is akin to running your Ferrari on low-octane gasoline.

PROBLEM 1 Huge File-itis

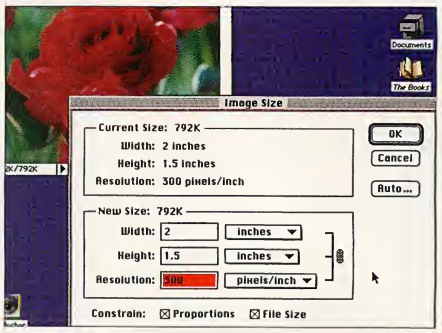
Scanned images can be huge. They can take over a hard drive like Windows NT in an IS department. Often, scanned images are far larger than they need to be to get their job done, almost always because the resolution at which they were scanned was too high. Fortunately, armed with a few resolution rules of thumb, you can keep files as small as possible. We'll start with the idea that your original is about the same size as the spot where you want to use the scanned image; that is, you won't be doing any enlarging or reducing. We'll cover that a little bit later.

First, decide where the final file (which includes the scanned image) will end up. Will it be displayed on a monitor (such as on a Web page), or will it be printed on a laser printer? The resolution of the output device makes a world of difference. Once you know that number, you can figure out the resolution at which the original should be scanned. Here are some common resolutions:

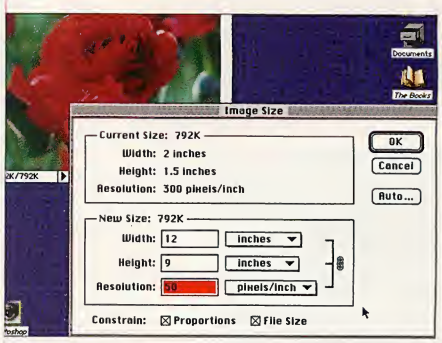
- Monitor: 72 dpi
- Inkjet printer: 360 dpi (some are 360 x 720 dpi, but for all practical purposes, consider it a 360-x-360-dpi printer)
- Laser printer: 300 dpi or 600 dpi

If you don't know your printer's resolution offhand, find it in the machine's documentation.

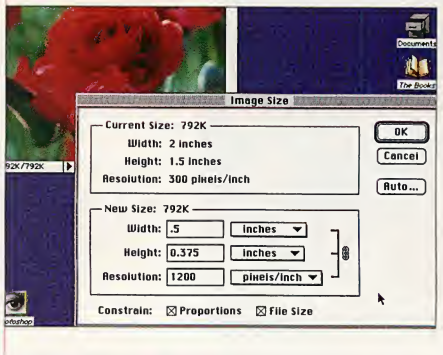
If your image will be displayed on a monitor, things are pixel-for-pixel easy. Scan your image at 72 dpi, and you'll end up with an image on-screen that's the same size as your original, and you won't waste pixels.



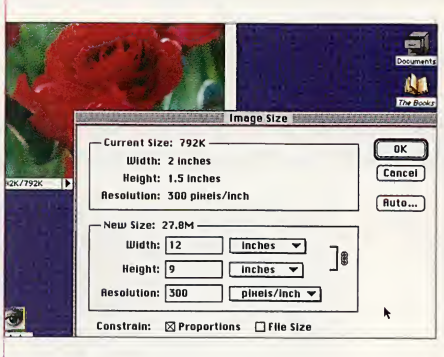
1. THE ROSE IMAGE was scanned at the original size at 300 dpi.



2. WHEN THE PRINTING size was changed to 12 x 9 inches and the file size was constrained to the original file size, the resolution dropped to 50 dpi.



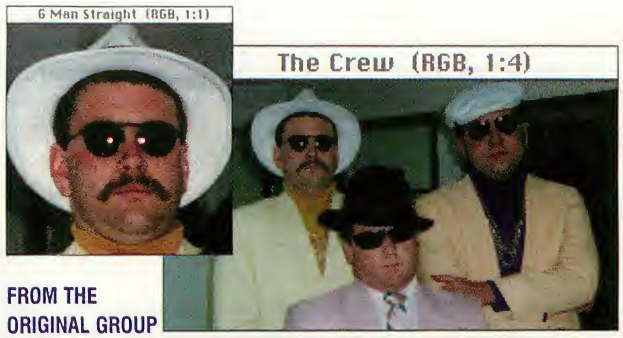
3. WHEN THE PRINTING size was changed to 25 percent of the original and the file size was constrained to the original size, the resolution jumped to 1,200 dpi.



4. IF YOU ALLOW PHOTOSHOP to interpolate the file to retain the 300 dpi at the 12-x-9-inch printing size, the file size changes to a whopping 27.8MB.

Your Scanner's Resolution

Deciphering a scanner's resolution is confusing. Manufacturers often rate products at both the actual (optical) and enhanced (interpolated) resolutions. My Apple OneScanner's optical resolution is 300 x 600 dpi; its interpolated resolution, 2,400 x 2,400 dpi. In the optical rating, the 300 refers to the resolution of the charge-coupled device, which is what "sees" the item being scanned. The 600 refers to how small an increment the "step down" motor can move the scanning bar. Your scanner's true resolution is the smaller of the two numbers. If you're using Photoshop for interpolation, you can basically ignore the manufacturers' interpolation claims. If you want a higher resolution, look at the optical rating.



FROM THE ORIGINAL GROUP shot we enlarged the section we wanted and sharpened it twice. You should adjust hue, contrast, and luminance before you interpolate, but wait to sharpen until you've bumped the image up to the intended size. The more pixels Photoshop has to work with, the better the end result.

Printing, however, is a little different, because it involves halftones and line screens. Luckily, you don't need to know too much about these two things to get a good scan. We'll figure out your ideal scan resolution by using the printer's best line screen. Bear with us; the calculation gets a little muddy, but it's worth wading through.

Scan resolution does not equal printer resolution. If you have a 600-dpi printer and you scan an 8½-x-11-inch, grayscale image at 600 dpi to print on that printer, you'll have an image that exceeds 40MB and will take hours to print. And most of that information will be wasted pixels because of the way printers work.

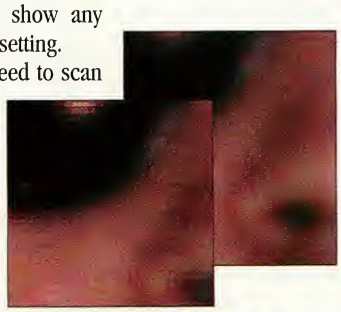
To print an image, your printer and computer convert images into halftones by changing light and dark areas into patterns of dots. Lighter areas use fewer dots, darker areas use more dots. (The smaller the dots, the clearer and sharper the images, which is why printers with higher resolutions produce better-looking images.) Printers use line screens to measure the resolution of halftones. Here's why that's important: A 300-dpi Apple LaserWriter prints good halftones at up to 60 lines per inch (lpi). At line screens higher than that, the LaserWriter can't make dots small enough to make good halftone dots. A rule of thumb to determine what scan resolution to use is to double the printer's line screen. Therefore, an image destined for a 300-dpi LaserWriter—capable of a 60-lpi screen—should be scanned at no more than 120 dpi.

Here are some common printer line screens and suggested resolutions to use with them:

Printer's resolution	Printer's line screen	Scan resolution
300-dpi laser printer	60 lpi	120 dpi
360-dpi inkjet printer	60 lpi	120 dpi
600-dpi laser printer	85 lpi	170 dpi

Some people say that it's necessary to scan at only one and a half times a printer's line screen. Experiment with that setting. If your printed images don't show any degradation, scan at the lower setting.

To enlarge images, you'll need to scan them at a higher resolution. If you want to double the size of your original, double the scan resolution. (For example, to double the size of an image meant for a 600-dpi laser printer, scan it at 340 dpi.)



WITHOUT INTERPOLATION, heavy pixelation occurs when blowing up photos to many times their original size.

Enlarging your image by scanning at a higher resolution will enlarge your file size and run you up against your scanner's maximum resolution quickly, so learn how to deal with "Itty-bitty Originals" in the next step.

NEED TO KNOW: Halftones are images made up of a series of dots, as seen in newspaper photos. This printing method allows printers to create the illusion of lots of shades of gray using only black ink on white paper. A halftone's line screen is the number that indicates how many lines of dots fit in an inch. (Newspapers are typically printed at 85 lpi; magazines are generally between 133 and 150 lpi.)

PROBLEM 2

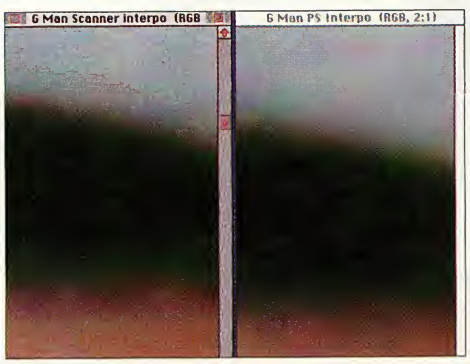
Itty-bitty Originals

To "blow up" a scan (print it larger than the original image), you will have to interpolate some picture information. How much you'll have to interpolate is determined by the output resolution you need. Let's assume that you are enlarging a portion of a photo, such as one face in a group shot.

There are two ways you can go about blowing up a portion of a picture. You can scan it at your scanner's true maximum resolution (also referred to as optical resolution) and let Photoshop interpolate it, or you can interpolate it while you're scanning, using the interpolation feature built into most scanning software.

If you want to increase the scanning resolution to 600 dpi (and your scanner's optical resolution is only 300 dpi), the software interpolates by looking at each pixel in the scan and then inserting an extra pixel between each adjacent pair. It determines the color and luminance of these new pixels by comparing the two on each side of the extra, guessing at what the new one should look like.

It sounds complicated, and it is. Nevertheless, Photoshop and most decent scanning software packages do a pretty good job. You need extreme magnification to see any difference in scan quality between the two. The real advantage in using Photoshop for your interpolation chores is in the speed of the process. Photoshop takes



AT EXTREME MAGNIFICATION, the file that was interpolated by Photoshop (on right) shows a little smoother, more gradual interpolation method.

much less time to get the scan to the proper size and resolution.

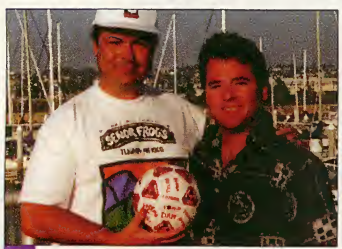
Do the various contrast, brightness, and hue adjustments on the lower optical-resolution image in Photoshop before you interpolate it up to the desired specifications, and you'll also get a speed increase, because it's much quicker to do these on a small image than on a large one. You should, however, leave the sharpening step (usually a necessary task even when you don't interpolate) for the final image. The "sharpen" filters work much better when you have more pixels for them to "bite" on.

Always scan from an original that is as close as possible to the intended output size. (Larger is better than smaller.) If an item needs to be "blown up," scan at the highest optical resolution and do any sizing and resolution adjustment within Photoshop.

PROBLEM 3 Cruddy Color

In the early days of flatbed scanning, you used to hear a lot about colors being skewed and hues being off. With the advent of color management software (of which ColorSync is an unheralded champion), this is far less of a problem. Often the slight off-color tint of a photo is magnified by the limited color palette of the scanner and/or printer. For example, a photo that is just a little on the "warm" side can result in some really orange skin tones when it prints out on your StyleWriter 2500.

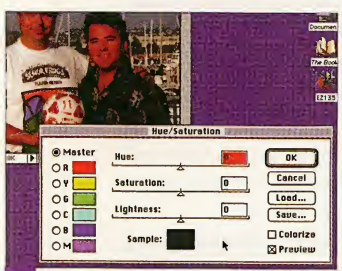
Photoshop offers hue and saturation control over images (as does most image-manipulation software). One of Photoshop's best features is that it gives you control over the individual hues, allowing you to alter specific tones in the picture and leave the rest alone.



1. A PHOTO TAKEN NEAR SUNSET, and after a full day of sunshine, can cause flesh tones to be red and ruddy.

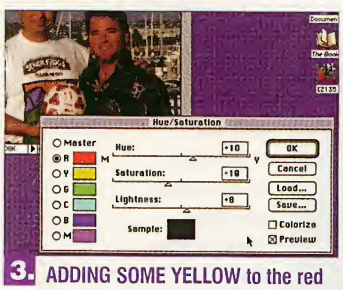
Let's say you have a picture of two people standing in front of a blue sky late in the day. It's not unusual for their skin tones to take on a very warm appearance, even if they aren't beer-laden and sunburned. Although you want to correct the skin tones, you certainly don't want to affect the blue sky and other items in the photo.

Fix the skin tones by accessing the Hue/Saturation control panel (under Image) and click on the red section ("R"). I find that if I add some yellow to the red mix, decrease the color saturation, and then lighten it up a little, the skin tones normally fall into place.



2. RATHER THAN ADJUST all the tones globally, you'll want to deal with only those in the red spectrum.

It would be nice if there were a magic formula to figure the number of manipulations the "average" bad scan needs. Unfortunately, there is no average—you'll just have to try it out for yourself.



3. ADDING SOME YELLOW to the red value, desaturating the color, and lightening it up make the flesh tones appear far more natural.

PROBLEM 4 That's a Moiré

You may want to scan a photo that has been previously printed via halftone, such as in a brochure or a newspaper. When scanning halftones at a high resolution, you will often get a series of bars, or a herringbone pattern, referred to as a moiré pattern. The many variables in the halftone printing process (such as line screen number and angle) mean that there is no single solution to the moiré problem. One rule, however, is universal: The higher the resolution of the scan, the more apparent the moiré will be.

THE INITIAL SCAN resolution of 300 dpi causes a moiré pattern. It shows up as rainbow-colored stripes throughout the photo.

THE SAME PHOTO scanned at a much lower resolution of 150 dpi has no moiré problems.

TILTING THE PHOTO slightly on the scanner can result in an increase, a decrease, or, as in this example, a change in the moiré pattern. This herringbone pattern is a common moiré problem.

AFTER ONE APPLICATION of the Blur More filter, the moiré has disappeared with very little reduction in sharpness, even though this image has retained its 300-dpi resolution.

The first step to avoiding a moiré pattern is to determine precisely the resolution you need and scan the image at that resolution. If there is no moiré, you're in luck. If you have a problem, you should first try the Blur More option under the Filters menu. Although this filter will soften the image, it will remove all but the most glaring cases of scanning moiré.

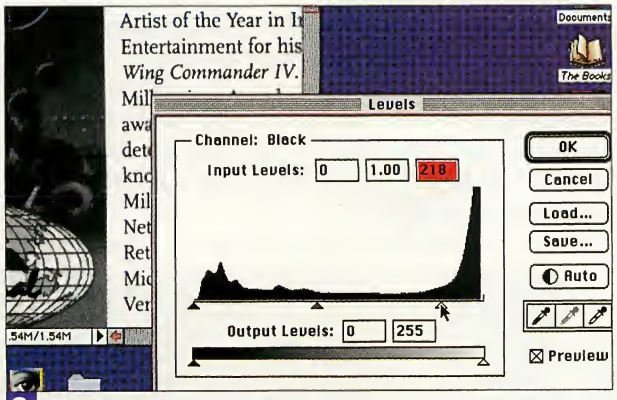
In extreme cases, try changing the angle at which you place the photo on the scanner. This trick may decrease or do away with the moiré pattern altogether. Just as often, however, it will either increase the pattern or change it into a totally different problem, such as going from the herringbone to bars.

If that happens, just rescan the image at a different tilt degree or at the opposite angle. Remember, though, that even if this workaround works, you will need to rotate the scan in Photoshop (or your scanning software) to get the image straight again. This may result in some loss of detail; the extent of loss depends on the scan resolution.

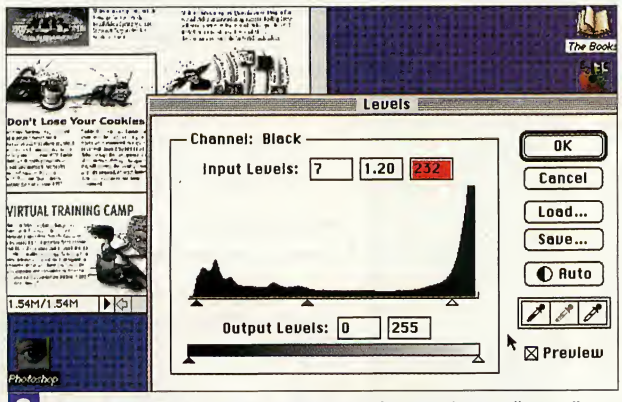
PROBLEM 5 Muddy Line Art

The best way to scan a text-filled document (or line art document) is in the 1-bit, "it's either black or white" mode. This approach makes for crisp black lines against a white background. Unfortunately, it also makes for very blotchy photos and continuous-tone graphics, and if the text is printed on top of a continuous-tone graphic, you simply won't be able to read it.

1. BEFORE WHITE POINT ADJUSTMENT, the page is noticeably gray. A sample taken with the eyedropper tool shows the difference (look at the cursor on the palette). When this page is printed, the problem will get even worse as your printer attempts to shade the background.



2. MAGNIFYING THE SCAN will allow you to convert the background to true white without impinging on the text portion of the scan.



3. AFTER THE WHITE POINT adjustment, the page is very "clean."

Saving Your Scans

When you're adjusting scans, it's important to remember that you're working with your original. If you go too far in any manipulation, it will be hard, if not impossible, to return to the starting point. If you're concerned about the possibility of not being able to rescan, such as when you will not have access to the original material, you should always perform your scan manipulations on a copy of the original scan. Assuming that the scan isn't incredibly large, and that you're blessed with a roomy hard drive, doing a Save as... on the scans at different stages in your changes will allow you to safely experiment and get the results you want.

Preserve the integrity of a printed page by scanning in grayscale mode. Unfortunately, both the text and the background will appear in various shades of gray as well, resulting in a "muddy" scan. This result is particularly problematic when the image is printed. It's even worse when the background page isn't white, such as the Yellow Pages.

This problem is easy to solve. Once you've scanned the page into Photoshop, access the Levels function (which is a submenu of the Adjust function) under the Image menu. Move the far-right triangle, under what looks like a mountain range of tonal values, toward the left, redefining where "white" is in the scan. If you have the Preview option selected, you'll see an immediate difference as you adjust the white point. For close detail, you can magnify the scan to easily read the text to make sure you aren't adversely affecting it. If the text suffers when you get the white where you want it, adjust the middle triangle to manipulate the "middle gray," and bring the text back into line. Also apply the Levels adjustment to color and grayscale images to brighten (or otherwise adjust) them.

Again, there is no magic formula to determine what degree of adjustment will be necessary.

Scan Management

Once you have your scans just the way you like them, you will probably use a page layout program for your final output. My favorite is Adobe PageMaker, but most programs handle scanned images in roughly the same way. Depending on the value you've set in the program's preferences, your page layout program will alert you when you place an image that will result in an unwieldy document file. It will then ask you if you want to place the entire image in the document or just use a placeholder.

If you opt for the entire image, then the document file size will be increased by the size of the scan. A newsletter using only two or three scans will quickly become far too large to fit onto a floppy disk. Although this isn't a big problem if you're going to print your project on your personal printer, it can be inconvenient if you need to take the project to a commercial printing firm for final output on a high-resolution printing device.

A better method is to opt for the placeholder option, which imports a very low-resolution version of the image for placement, cropping, and sizing purposes. When you print the document, the application accesses the high-resolution file and applies the cropping and additional image tweaking.

If you keep your scans in the 1MB range (which is normally good enough for black-and-white and grayscale printing), you can comfortably fit each scan on a floppy disk to transport the files to your final printing destination. Simply place all the scanned images and the document file in the same folder on the host Mac and you're ready to go. —*J. Daniel Jones*

how to

how to add sound to a web page

For a truly multimedia experience, let your Web site be heard, not just seen.

FIND THE SHAREWARE mentioned on The Disc.

The World Wide Web may qualify as "multimedia," but in case you hadn't noticed, it ain't too "multi." It's thin on every medium but the visual, and there isn't much out there in the way of sound. Do your part to remedy this horrible oversight. This month we'll show you how to prepare and upload sound samples from an audio CD to your Web site.

What if you want to take a sound from, say, an audiocassette instead of a CD? You'll need an AV Mac or a Mac with a sound-processing card, such as Digidesign's Audiomedia II or Spectral Innovations' Numedia. If you're so equipped, you just need to run an audio cable from the line-out jacks on your cassette deck to the audio-in jacks on your sound card or AV Mac. The microphone input on non-AV Macs will give you unhappy results.

Before you plunge into our tutorial on adding sound to your Web page, however, there are a few things you should know.

Your visitors won't hear music greet them when they arrive at your page. That's possible only if they use a sound plug-in file such as RealAudio or Shockwave (few people currently have one installed) and if you use an expensive and complicated tool to create these types of sounds. What we'll do instead is create a sound file for your visitors to download. A browser will automatically play it after download, using a helper application such as Norman Franke's SoundApp freeware.

A 30-second sound file with AM-radio-quality, monaural sound occupies roughly 350K. Visitors with a 28.8Kbps connection will spend about three minutes downloading each 30-second sound, and 14.4Kbps connections will take at least twice that long. Remember your own precious Web space, too: Just six of these 30-second samples will occupy more than 2MB.

Unless you've created the sound or taken it from a special royalty-free collection, you may not legally post a sound file without explicit permission from the copyright holder. It's a myth that copyright applies only to people using the sound in a for-profit venture. The good news is that it's surprisingly easy to get a record company's permission to post 30-second samples from a CD. I've had good luck simply calling up a record company and asking.

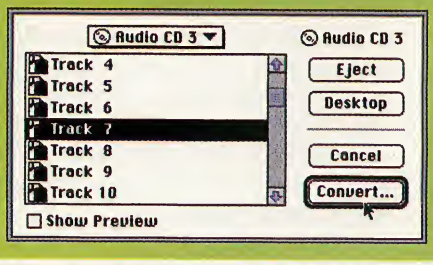
Finally, like everything else, sound comes in way too many formats. On the Web, you'll mostly run across three: ulaw, which originated on Unix machines; WAV, which originated on Windows machines; and AIFF, which originated on Macs. Every platform has sound-playing utilities to handle all these formats, but WAV and AIFF offer the best-quality sound. AIFF has the advantages that it's easy for us Mac users to create and play, and is also popular in the Windows world.

Let's assume you want your visitors to be able to download a 30-second sample from your favorite CD, the Scamp Records reissue of 101 Strings' 1968 classic "Astro Sounds From Beyond the Year 2000." You've already received permission from Ashley at Scamp, and the CD is in your Mac's CD-ROM player. (Remember, you must have two Apple extensions—Foreign File Access and Audio CD Access—installed in your Extensions folder). Follow these steps to get your site humming.

STEP 1 Get Sound Onto Your Hard Drive

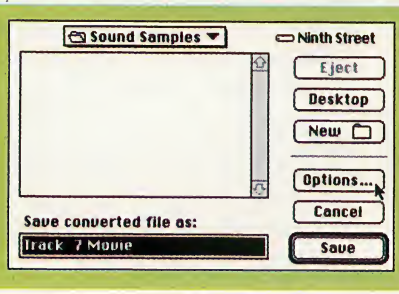
A The freeware MoviePlayer utility from Apple allows you to copy sound files directly from a CD, though the option is rather well hidden. Use the Open command to select the CD and the track. Then click the Convert button.

YOU CAN'T NAME tracks when copying them. Bummer!



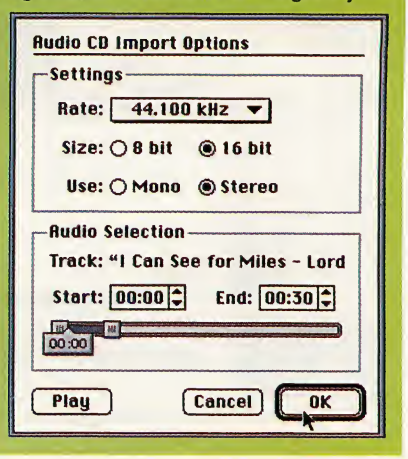
B Click the Options button in the Save dialog box that appears.

DON'T SAVE THE TRACK until you've selected the 30-second sample using the Options button. Now you can name the file.



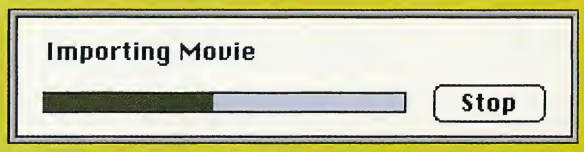
C The dialog box that results will let you select the exact start and end times of your sample. The pointer will tell you the precise elapsed time within the track as you listen. Drag the two sliders to select a 30-second sample based on the time you read from the pointer (or type in the start and end times). Leave the sampling rate set to stereo and 16 bits—you'll change it later with a sound-editing utility.

SELECT YOUR SOUND sample in this box.



D When you're happy with the sample, click OK and the file will be saved to your hard drive as an AIFF file occupying probably 3MB or 4MB of hard disk space. You can play it back with any QuickTime movie-playing application.

If you're lucky enough to own Macromedia's SoundEdit Pro, use it instead of MoviePlayer to copy the track because the track will be recorded directly into SoundEdit Pro, where you can tweak it. In SoundEdit Pro, choose Convert CD Audio from the Xtras menu, and follow precisely the same steps using precisely the same dialog boxes as just described.



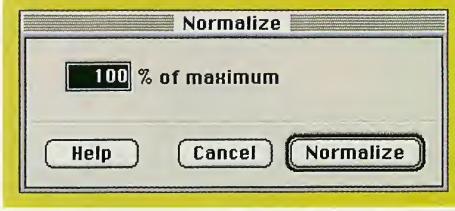
A 30-SECOND SAMPLE will take time to copy.

STEP 2 Tweak the Sound

If the sample is perfect just the way it is, you're ready to post it on your Web site, but chances are you'll need to make it a reasonable size, and you'll probably want to give it a pleasant fade in and fade out. You can use an expensive professional tool such Digidesign's Protools or Macromedia's SoundEdit Pro, or a shareware application such as SoundEffects.

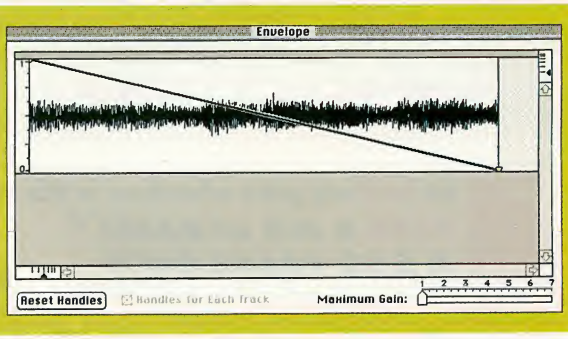
Let's use SoundEdit Pro. Make a copy of your sound file and open it. If you know what you're doing, first tweak the sound by applying functions such as Normalize, Equalizer, Compression, and Noise Gating to get the most from the sample.

A SoundEdit's Normalize, under the Effects menu, is especially useful and essentially foolproof. It makes the sound as loud as possible without "clipping," which creates distortion. Set Normalize to 100 percent and apply it to the whole sample. If you don't know what the other terms mean, don't worry about it.



NORMALIZATION WILL HELP get the most out of your sound sample.

B Now let's add a smooth fade in and fade out. Save a copy first so you can revert to a clean original. Then select about five seconds of sound at the very end of the file and choose Envelope from the Effects menu. Drag the right-hand handle all the way to the floor (bottom of the screen) to smoothly fade out the last five seconds of the sample. Use the Envelope effect to do precisely the opposite to the first five seconds of the sample for a smooth fade in. Experiment with faster or slower fades.



DRAG THE HANDLE on the right all the way down to fade the sound out.

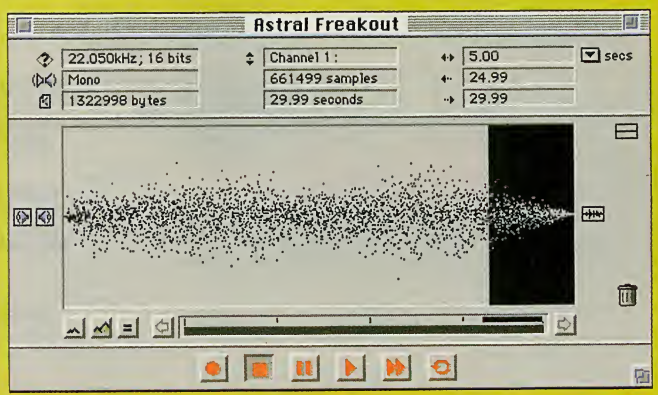
STEP 3 Shrink the Sound

A You'll also want to use SoundEdit Pro to shrink the file to a less painful download size. Your best bet for a fair tradeoff between sound quality and file size is 8-bit sampling resolution, 11KHz sampling rate, monaural. If your sample ends up sounding horribly noisy—and some samples will—consider creating a sample half the length at twice the sampling rate: a 15-second sample at 22KHz.

AN 8-BIT, 11KHZ FILE still sounds pretty good.

B If SoundEdit Pro isn't in your budget, use a shareware sound tool such as SoundEffects ($15). It lacks the ability to record directly from the CD, so you'll need to copy the file with MoviePlayer and then open it in SoundEffects.

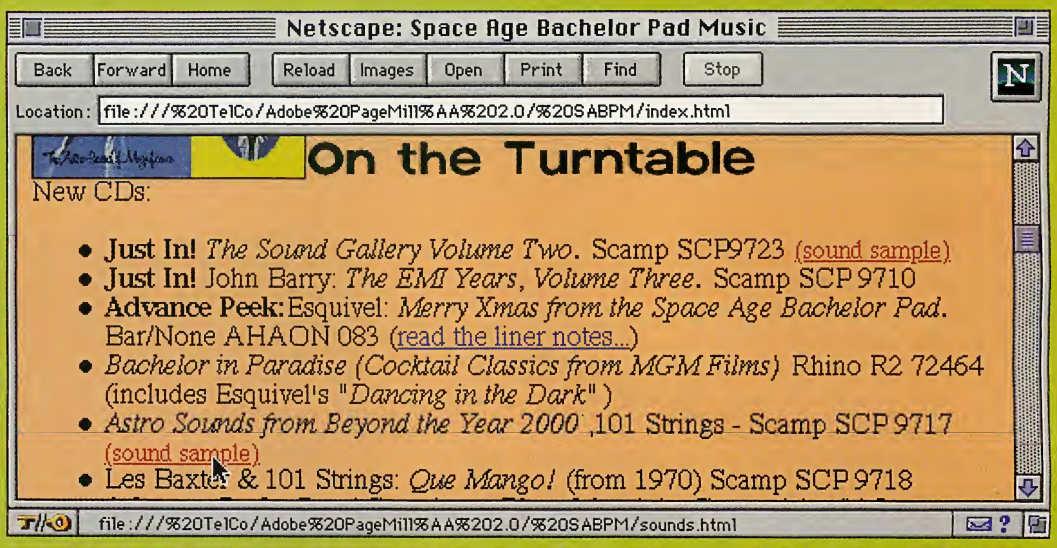
SoundEffects has simple fade-out and fade-in effects—just select a portion of the sound and apply the effect. When you need to reduce the sound to 8-bit, 11KHz, use SoundEffects' Downsample Bits and Resample Rate functions under the Effects menu.



THE SHAREWARE PROGRAM SoundEffects offers basic sound-editing capabilities. To apply an effect such as fade in or fade out, select a portion of the sound and then select the effect from a pull-down menu.

STEP 4 Upload Your Sound!

A previous "How To" (Dec/96, p102) covered the details of uploading files to your Web site, and uploading a sound file is no different from uploading any other file. After you've put a pointer to the file on your page, use Fetch shareware to upload the sound in raw format to the proper directory on your Web host. You may want to create a special directory for sounds. Be sure to test the sound, and ask a Windows user to download and test it as well. Nothing pisses off visitors more than a three-minute download that produces nothing!
—Joseph O. Holmes



DEVOTE A PAGE TO YOUR SOUND SAMPLES. The advantage is that you'll have room for information on the type of helper application your visitors will need—such as Rod Kennedy's freeware SoundMachine (for ulaw and AIFF) or Norman Franke's freeware SoundApp (ulaw, AIFF, WAV, and many more)—and for other details as well. Or you can simply sprinkle "Download the sound sample!" links throughout your pages.

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ask us your questions

We answer all of your technical questions, no matter how simple or complex.

FIND THE SHAREWARE mentioned on The Disc.

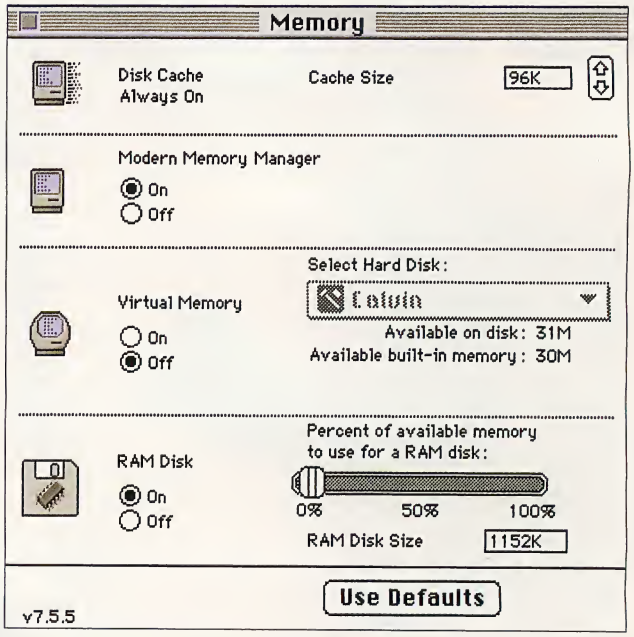
Q What is the RAM Disk in the Memory control panel? I have 40MB of real memory, but I have never used the RAM disk. Should I turn it on, and how much memory should I give it?

A A RAM disk is a portion of your Mac's memory set aside to act as a disk drive. RAM disks differ from real disks in that they are much faster and don't retain their contents when the computer is shut down. For these reasons, RAM disks are best used to hold temporary files that you access frequently.

To create a RAM disk, double-click the Memory control panel and click the On radio button. Drag the lever to the percentage of available memory you want to use. Memory allocated to a RAM disk is no longer available for other system uses, so don't make the RAM disk so large that you can't run desired programs. With 40MB, that shouldn't be a problem. Start off by allocating a megabyte or two. Close the Memory control panel and choose Restart from the Special menu. When the Finder reappears, you'll see a RAM disk icon on the desktop along with your other volumes. You can copy and write files to the RAM disk, but remember that this storage is temporary. Shutting down erases the RAM disk, and a crash can wipe out its files (the contents survive restarts, however), so never store your only copy of a file on a RAM disk, and always back up the contents of the RAM disk to a hard drive or floppy before shutting down.

A popular use of RAM disks is to hold the cache files that Netscape Navigator creates as you surf the Web. Whenever a requested file resides on the RAM disk, it loads much more quickly than if it had to be retrieved from the hard disk or the Internet. To designate the RAM disk as the place to store Navigator's cache, choose Network Preferences from the Options menu in Navigator, then click Browse and select the RAM disk. If necessary, resize the cache to fit the RAM disk.

Another great reason to use a RAM disk is to conserve battery life on a PowerBook. If you have enough memory to create a large enough RAM disk, it can contain a bare-bones System Folder and your most frequently used programs. Because all of the necessary files for working on your Mac are on the RAM disk, the hard drive can spin down, greatly reducing the battery drain. Just remember to copy the documents on the RAM disk to a floppy every so often, just in case.



YOU CAN SET UP A RAM DISK in the Memory control panel and use it to store Netscape Navigator's cache for faster Web page redraws.

Q I have a Power Mac 7200/90, and its 500MB hard drive is almost full. What's the best way of adding another drive? Is there room inside my Mac for a second internal drive? If not, should I buy an external drive? Or should I buy an empty external case for my existing internal drive and install a new drive in its place?

A The easiest thing to do is buy an external drive and attach it to the SCSI port on the back of your Mac. Of course, external drives cost $50 to $100 more than internal drives of the same size because they come in a case with a power supply and cables. Although you could yank the 500MB drive, put it in an external case, and insert a new drive in its place, there's no need to go to that extra work and expense. Fortunately, all 7200 and later Power Macs have at least one internal expansion bay large enough to hold a second 3½-inch, half-height drive. The SCSI cable and power cord are already inside, so all you need is an internal drive, plastic

Tips

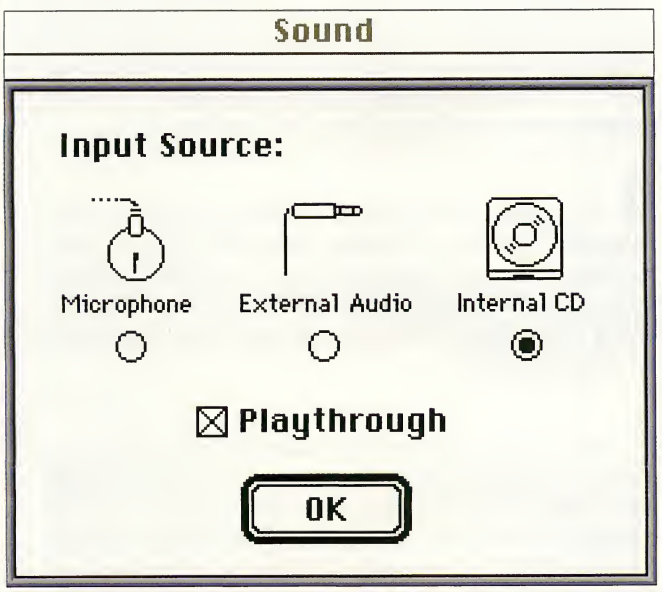
Restoring Startup Screen Color

In the October 1996 issue of MacAddict (p86), I recommended zapping PRAM to restore a color startup screen that suddenly began appearing in black and white. Reader Klaus Krause suggests another fix. Open the Monitors (or Monitors & Sound) control panel and change the color depth of the startup monitor to black and white, or any other setting, then change it back to the desired setting.

mounting sled (ask your drive vendor to supply this if possible, or order part No. 922-1124 from an authorized Apple service center and expect to pay about $12), and nimble little fingers. Getting the second drive in place is a bit tricky because the cables aren't very long and you must work in a cramped space, so it might not be a bad idea to hire a technician to perform the installation if you have any trouble (of course, this adds to the total cost of the drive).

Q **Two of my friends just bought Performa 6116s, and neither of them is able to play audio CDs. Everything seems to be working correctly (the AppleCD Audio Player is in the Apple menu), but no sound comes out of either the internal speaker or the headphone jack. What's wrong?**

A Most likely these Macs haven't been set up to play music from the built-in CD. That's easily rectified. Open the Sound control panel and choose Sound In from the pop-up menu. Make sure Built-in is selected, then click Options. In the following dialog box, click the Internal CD radio button, select the Playthrough checkbox, then click OK. You should now be able to listen to discs using the AppleCD Audio Player. If you want discs to begin playing automatically when inserted, make sure you have QuickTime 2.5 or later and select the Enable Audio CD AutoPlay checkbox in the QuickTime Settings control panel.



IF YOUR MAC WON'T PLAY AUDIO CDS, check to make sure that the Sound control panel is properly configured.

Q **I liked David Reynolds's recent comparison of new Macs ("Too Many *#!@$ Systems," Oct/96, p44). One nagging question remains, however. Is there any forthcoming software that will require a PowerPC 604 (or 604e) as a minimum to run?**

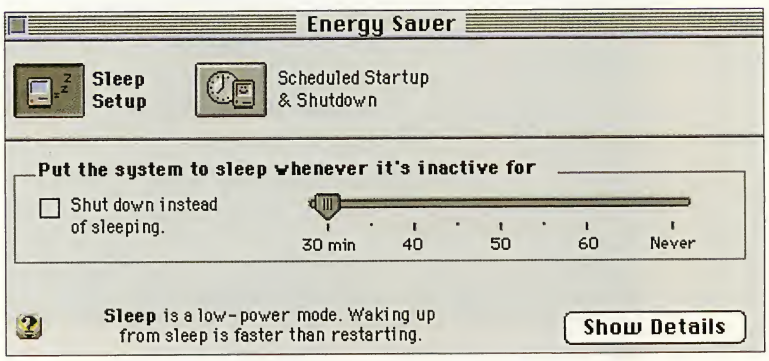
A I'm not privy to the development efforts of all Mac vendors, but it's unlikely that any publisher is going to release a mainstream product that requires a Mac with a PowerPC 604 or greater CPU in the near future simply because that would severely limit the size of its market. After all, it has been more than two years since Apple introduced the first PowerPC-based Mac, and there is still a huge number of programs that support 680X0 processors. Unless you plan to perform some seriously CPU-intensive tasks, such as high-end 3D modeling and graphics rendering, rest assured that any current Mac you buy today is going to provide plenty of power to run most programs well into the future.

Fun Factoid
Signing Bonus

If you've ever cracked open the case of an early Mac, you may have noticed a bunch of signatures in raised plastic on the inside back panel. Steve Jobs felt that the Mac was a piece of art, and since real artists sign their masterpieces, he and the other employees of the Mac division in 1982 affixed their signatures to a large sheet of paper. When everyone had signed, a film negative was made from the paper, and the signatures were chemically etched into the core of the tooling for the inside of the original Mac. Over time some signatures were added and others were dropped ostensibly to accommodate changes in the case design. Apple continued using case molds with signatures until sometime during the production of the Mac SE, at which time signature-free molds were substituted. The practice of hiding signatures in cases was revived briefly in 1989. The Mac Portable contains 60 signatures of the product design team etched in the case underneath the keyboard, and both the Mac IIci and IIcx have eight signatures of the product design team inscribed along the left side of the case, below the motherboard. *—From "The Mac Bathroom Reader"*

Q **Sometimes while listening to an audio CD on my Power Mac 7500 (I'm running System 7.5.3 Revision 2 with QuickTime 2.5 installed), the disc simply stops playing for no apparent reason. What causes this annoying discus interruptus?**

A Apple acknowledges that this is a known bug. On PCI-based desktop Macs, the Energy Saver control panel sometimes interrupts the play of Audio CDs if the "Shut down instead of sleeping" checkbox is selected. Until Apple gets around to fixing this problem (it's not solved with System 7.5.5), the only workaround is to deselect the checkbox.



IF YOUR AUDIO CD STOPS PLAYING for no apparent reason, try deselecting the "Shut down instead of sleeping" checkbox in the Energy Saver control panel.

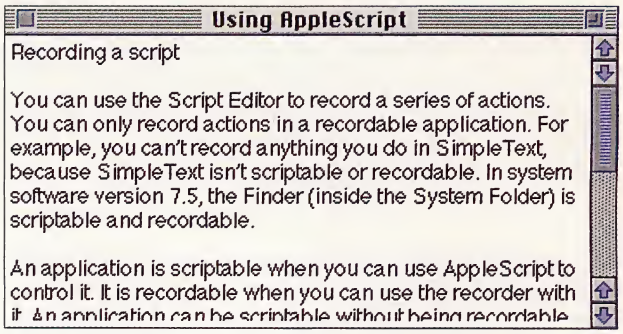
Q I finally upgraded from a Mac SE/30 to a new Power Mac with a 17-inch monitor. The difference in speed is unbelievable! However, after using the SE/30's built-in 9-inch monitor for so long, I find the large monitor a mixed blessing. It's great to have all that extra space, but I'm tired of mousing around such a huge screen. Any suggestions?

A I experienced the same thing when I first got a large screen. At first I bumped up Mouse Tracking to Fast in the Mouse control panel so the cursor would move farther for every inch I rolled the mouse, but that helped only a little. Fortunately, I found several shareware control panels that reduce the mousing burden considerably and offer useful new features.

First, I recommend that everyone get the shareware program Snap-To from Trevden Sherzell, no matter what size screen you use. This little gem automatically centers the cursor over the default button of dialog and alert boxes. Just click and the cursor snaps back to its original position. So simple and helpful, Snap-To should be part of the Mac OS.

I'm also a big fan of the shareware programs DoubleScroll and Smart Scroll. From Edward Voas, DoubleScroll puts up and down arrows at both ends of every scroll bar, thereby grouping all the controls necessary to scroll in any direction in one convenient spot. This works well in conjunction with Marc Moini's Smart Scroll, which expands the scroll box to show how large the portion of the document displayed in the window is compared to the whole document. Not only does this visually provide some useful information, the larger scroll box is easier to drag.

Another utility I couldn't live without is Dialog View, James Walker's control panel that expands the standard open and save dialog boxes to fill the screen if you wish. With more files listed in these dialog boxes, the need to scroll to find what you want is greatly reduced. Again, here's something so elegant and useful I don't know why Apple hasn't incorporated it into the Mac OS.



DOUBLESCROLL AND SMART SCROLL shareware programs reduce mousing distances by placing up and down arrows at the ends of every scroll bar and by enlarging the scroll box to show the portion of the visible document, respectively.

Finally, you should consider using a trackball instead of a mouse. I tried many different input devices over the years, and always returned to the mouse, until I set up two monitors on my Mac. All that extra space simply demands a better way of moving the cursor around. For me, the $115 Kensington Turbo Mouse 5.0 (800-535-4242; http://www.kensington.com) is the answer. Its large ball rolls smoothly in my palm, and it has four user-definable buttons logically placed where my fingers naturally fall. A flick of a finger sends the cursor flying from one edge of the screen to the other. It took me a few weeks to grow accustomed to using the trackball instead of the mouse, but now I'd never go back.

SNAP-TO IS AN INDISPENSABLE CONTROL PANEL that reduces needless mouse movement by snapping the cursor to default buttons in dialog boxes.

Q I'm about to upgrade to System 7.5.3 (the "Unity" release), and the ReadMe specifies that "if your computer has an IDE hard disk, you should update your driver as part of the installation of this software... using Drive Setup." Forgive my ignorance, but what's an IDE hard disk?

A Not too long ago, all Macs used SCSI (Small Computer Systems Interface) hard drives exclusively. Then Apple figured out it might be able to save some money if Macs used the cheaper IDE (Integrated Drive Electronics) drives commonly found on IBM PC AT compatibles (IDE is also referred to as the ATA interface). IDE drives are comparable to SCSI drives in speed, but you needn't bother setting identification and termination. Because of differences such as these, make sure you are using IDE-aware hard disk utilities whenever attempting to update drivers or perform other functions such as formatting. The following Mac families have IDE disks internally but still have a SCSI port for external devices: Mac 630, LC 580, Performa 5200/5300/6200/6300, PowerBook 150/190/2300/5300, and Power Mac 5200/5300.

Owen W. Linzmayer (AskAddict@AOL.com; http://www.netcom.com/~owenink/home.html) is a San Francisco-based freelance writer and the author of "The Mac Bathroom Reader." Please submit technical questions or helpful tips directly via e-mail or send them c/o MacAddict, 150 North Hill Drive, Brisbane, CA 94005.

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powerplay

Find out why Warcraft feels so much like a Mac game, despite its PC origins.

Teasers

Catalyst

PUBLISHER: Devilution
CONTACT: http://138.86.6.82/cat/index.html

Whew, the 3D Mac game market is exploding! Catalyst is set on postapocalyptic Earth, where corporations have taken over the majority of the world and an underground group is uprising against the corporate rule. You are a maverick whose skills are valuable to both sides. Action unfolds depending on what you do, to whom you've spoken, and whom you've killed.

Eric's Ultimate Solitaire CD

PUBLISHER: Delta Tao
CONTACT: 800-827-9316; http://www.outland.com/deltatao

America's favorite solitaire game just got even better. Eric's Ultimate Solitaire CD adds games, backgrounds, and sounds (and it comes on a CD-ROM—hence the "CD" in the title). You can set the program to randomly select a new background for each game, and you can add your own PICT files or ppats. While you're playing you can listen to QuickTime music files included on the CD. And now, at last, you can cheat. After all, the real goal of Solitaire is to waste time, not be honorable. Cheating lets you pull a card from a stack (face up or down) and move it to the top of the pile.

Noir

PUBLISHER: Cyberdreams
CONTACT: 818-222-9348; http://www.cyberdreams.com

Step into shadowy Los Angeles in the forties. You're a private eye who must follow the footsteps of your missing colleague, Jack Slayton, to find his killer. Completely in shades of gray, Noir takes you through scenes comprised of both period clips and new footage.

Warcraft and Warcraft II were wildly successful games for Blizzard, both in their PC and Mac incarnations. The Mac versions, despite being delivered after the PC titles, managed to excite and enthrall us with compelling gameplay. With the success of the Warcraft titles behind it, Blizzard is committed to releasing Mac versions nearer to the PC release dates. Two more Blizzard titles are now under concurrent development at Future Point, the company that ports Blizzard's games to the Mac. Starcraft takes Warcraft out of this world and into space; Diablo takes you under a spooky world to fight in dark catacombs.

What is it that makes us like Future Point's ports so much better than other PC ports? Does Blizzard just make better games? Did it poison the coffee of other developers? To find out, we spoke with Brian Fitzgerald, principal of Future Point.

Brian Fitzgerald

MA: How do you successfully port games to the Mac platform?

BF: First, you have to produce a game that is at least as good as the original. If a game doesn't come out at the exact same instant as the original, people feel let down if the ported game isn't better. You have to exceed the features of the original. Second, it has to be a Mac program. People might say, "It's a game; we don't need to make it follow human interface guidelines." That's true to a certain extent, but you can't just suspend the entire Mac interface, or people who play the game do not feel like they're on a Macintosh anymore.

With Warcraft I, we redid a lot of the two-player dialog [boxes] to make them Mac dialogs instead of the PC dialogs. Warcraft II was easier because they implemented a dialog manager on the PC that was similar to the Mac's. So we enhanced things—we did make our own Mac opening dialog—but we were able to get away with not changing much else because they had already come toward the Mac interface. And that may be the key as to why some people perceive a game as a good port or bad port. Doom had a lot of complaints when it came out last year because it looked exactly like the PC version. People were expecting it to somehow look more Mac-like.

MA: Does Blizzard give you free reign to make these interface changes?

BF: They've been very cool about everything. They basically say, "Here, go do this." We come back and show them, and they say, "Oh, that's really cool." Every once in a while, they'll say, "Oh, you can't do that." For the most part, though, they trust that we know what we're doing on the Mac.

MA: So you were able to add features to Warcraft II that just aren't on the PC, such as speech recognition?

BF: Some of those features were simply easier to add to the Mac than the PC. The other part is just that the PC designers concentrated on other things. The PC version could have had stereo sound, and I imagine Starcraft PC will have stereo sound, but we were able to put that in Mac versions of Warcraft I and Warcraft II pretty easily. It's all a matter of time. You work on a game for a year and you've got to ship it.

MA: Do you have any part in actually designing the game itself?

BF: That's pretty much Blizzard. We're obviously hoping to put more and more into real input and partnership, but so far we've just been porting.

MA: But then that gives you the leeway to do cool Mac stuff.

You can't just suspend the entire Mac interface, or people who play the game do not feel like they're on a Macintosh anymore.

WARCRAFT II IS ONE OF THIS YEAR'S HOTTEST TITLES, and for good reason: All elements of the game, from gameplay to art to audio, add up to a freakin' awesome experience.

LOOK FOR STARCRAFT this spring. Starcraft takes Warcraft to the last frontier: space. Three races—human, Protoss, and Zurg—battle for intergalactic dominance.

COMING THIS SUMMER is Diablo, a dark gothic fantasy. You develop a character who then explores haunting catacombs.

BF: It works out pretty well for everyone. A couple of times people from the PC side have come to look at stuff and said, "Wow, that's cool; we should add that to the PC version." In particular, 3D sound—one of the lead designers on the PC Warcraft II sat down and played with Mac Warcraft and loved the 3D sound. Hopefully we'll be able to enhance it in Starcraft. There were some things that we wanted to try with placement—we didn't go all the way—there's a lot of room there. Right now, we're working on Diablo and Starcraft at the same time.

MA: Do Diablo and Starcraft use the same kind of engine as Warcraft?

BF: No, Starcraft and Diablo are Windows 95 applications; Warcraft and Warcraft II were DOS applications. So in some respects, our job is easier; in others, it has been harder because Windows has different ways of doing the interface. With DOS they didn't even bother [to think about the external interface] in the first place. But it's good to see the PC side going to Windows, because it means that they're starting to have to worry about the same things that we've worried about on the Mac for years. Being respectful of other applications, for instance.

One of the decisions we made in Warcraft was to let other programs run at the same time. A lot of games just assume they're the only program running on the machine. But a lot of people run a chat program and Warcraft II at the same time, while they're looking for someone to play on the Internet. If we hadn't taken some care to make sure they could run both programs at the same time, that wouldn't have been easy. A lot of games basically suck up all the CPU cycles; DOS is the same way. When you're running a DOS game, it assumes that it owns the machine.

MA: Is that why people claim it will be easier to port more Mac games, because Windows has something analogous to the Mac toolbox and DOS doesn't?

BF: Not really. When we ported Warcraft, we took the game and ran it in a thread inside our Mac program. We split the program into two parts for the Mac version—the user interface, which does all the graphics and toolbox calls, and then the whole game, as a sort of thread. That was actually pretty easy to do, by compartmentalizing things. In porting Windows programs, you start having Windows calls strewn throughout your code if you're not careful. People who write in DOS tend to write so close to the machine, they think almost in terms of hardware, and you really can't do that when you're writing on a Mac or a Windows-type platform. You've got to think at a higher level.

[How easy it is to port a game] has more to do with how careful the original programmers were to separate machine-dependent code out from the rest of the code. Even if you don't think your program will ever be ported, it really is better to write your code to keep the machine-specific stuff isolated. Windows 95 programmers are more likely to be cross-platform aware, if just from the effort of moving from DOS and Windows 3.1 to Windows 95. Apple's games sprockets do help, and they will *really* help when there are cross-platform versions of them (i.e., NetSprocket).

MA: What makes a great game?

BF: Attention to detail. Sometimes developers will do a game and they won't be able to express what their game really is—you'll see some shoot-'em-up games where you just fly around and shoot things. But something that can hold your attention for more than a few hours has a depth to it that is just almost indescribable. Warcraft II became a big hit because it has so many little touches. Any one of them you could just laugh off and say, "Oh, that's just a joke." But it has so many little touches that all work well together, people get drawn into it. And that is what separates the top games from all the other games.
—Kathy Tafel

more Teasers

F/A-18 Hornet 3.0

PUBLISHER: Graphic Simulations
CONTACT: 800-580-4723; http://www.graphsim.com
This updated version of the venerable Mac flight simulator has some very cool new features. Instead of a flat ground with pyramidal mountains, there's now a rolling 3D terrain. You can give your wingmen commands at the touch of a key—great for dogfights. And for those of us who've never flown a plane, Graphic Simulations has developed a multimedia training class complete with movies and instructor voices. The classes teach you how the plane reacts in different situations.

The Tick

PUBLISHER: Inverse Ink
CONTACT: 800-771-1344; http://www.inverse.com
In "The Tick vs. the Uncommon Cold," the evil Thrakkozog clones the Tick out of a certain mucus fluid in an attempt to take over The City. Although not strictly a game, this multimedia comic book is sure to have you grinning and giggling for hours as you navigate the mighty blue crime-fighter through an ever twisted, er, twisting, plot.

Weekend Warrior

PUBLISHER: Bungie
CONTACT: 800-295-0060; http://www.bungie.com
Not sold separately—don't call Bungie for this one. You'll pick it up when you buy 3D game hardware (such as ATI's Xclaim VR card) for your Mac. After picking your weekend warrior, follow a shell game to enter the arena of your choice. In the arena, you compete against the clock and other weekend warriors for fame and fortune. You need to accomplish a mission while fending off enemies. *—KT*

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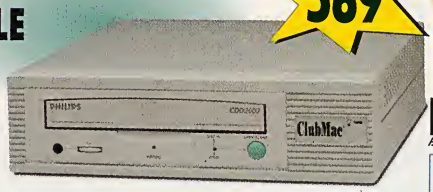

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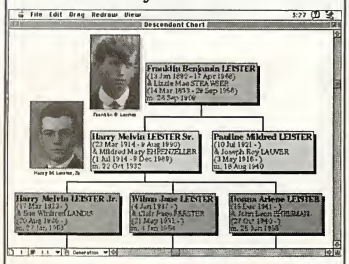

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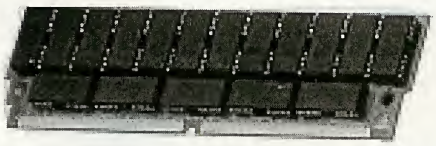

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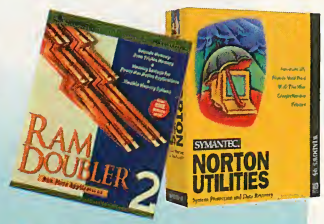

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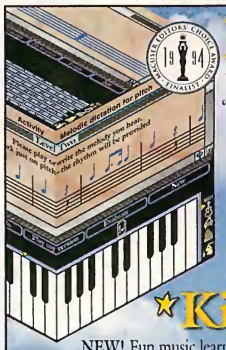

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shutdown

Hot Dog

Wishbone, TV's top dog and CD-ROM star, takes on the role of Bone of Arc in this direct-to-video release. We hope the movie will fare better than the poor pooch's CD-ROM rendition of "The Odyssey," which our local elementary school principal doles out as punishment for the more troublesome tots. Looks like we all have our crosses to bear.

Pick on a technology your own size

"Macintosh ActiveX is Microsoft's native implementation of ActiveX controls. (For those unfamiliar with a 'control,' the best way to think of it is as the next-generation plug-in technology for Web browsers.)" —Read this Microsoft press release backwards and in a mirror to decipher the hidden message: Microsoft, too afraid to compare ActiveX with the more powerful OpenDoc or the more popular Java, has decided once again to promote its own lower standard.

Overheard

"Some folks study long and hard to be idiots—and insist on proving it to everyone." —Chuq Von Rospach, Apple's Software Gnome and Internet Tweaker, in reference to people who don't read the directions on how to unsubscribe from mailing lists.

MEGAMERGER 2

Some members of Apple's top notch management team look oddly familiar. Upon closer inspection, we couldn't help but notice the striking resemblance of the following celebrities to Apple's Chief Technology Officer Ellen Hancock.

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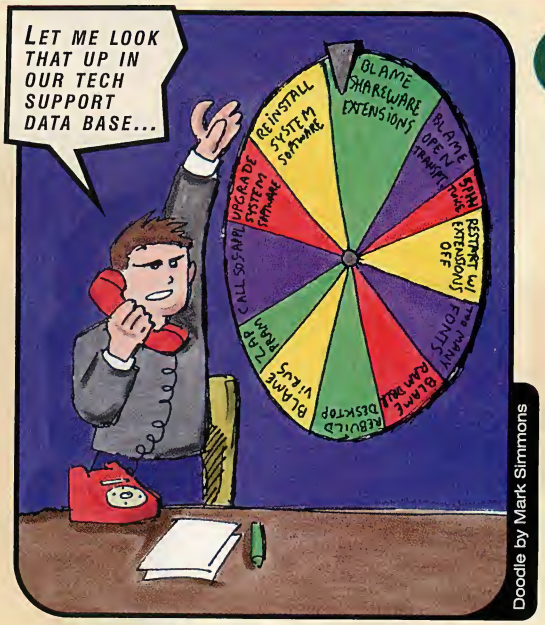

Doodle by Mark Simmons

PASS the RITALIN, PLEASE

"There's 52 million screaming K-12 children to sell to," said Robert Kondrick, manager of Apple's education product lines, in an October Reuters article announcing the eMate 300. —Wait, you can almost hear their young cries now... "You scream, I scream, we all scream for the Apple eMate 300! Quick, Mom, can I have an extra $800 before the technology goes away?"

Trials and ~~Errors~~

"I can no longer deal with it. It's far too complicated," said Netscape co-founder Marc Andreessen in an October 1996 interview on PBS's "Charlie Rose Show." Andreessen, complaining about his home PC, admitted that his CD-ROM drive won't work, his printer won't print, his computer crashes every hour on the hour, and he doesn't know why it's happening. Mere sour grapes, or the simple truth? Who cares?!

In God We Trust Our E-mail

"We are getting between 15 and 20 messages a day from all over the world," said Avi Moskowitz, president of Virtual Jerusalem (http://www.virtual.co.il), an Israeli firm that's handling God's e-mail. The company claims that it does not read the e-mail but merely prints it out and stuffs it into Jerusalem's Wailing Wall. The company does not, however, handle His voice mail.

Spare a Dime?

The MacAddict crew is now collecting donations for Associate Editor Dave Reynolds, whose name has been trademarked by Thursby Software Systems for its cross-platform file-sharing program, DAVE™. All proceeds from the Save Dave campaign will go toward the enormous licensing fees that Dave will now be forced to pay each time his name appears in print. All others going by the name of Dave are currently being advised to change their name to something less marketable like... Bob. Ummm, we mean, Lisa. No... hmm... how about A.D.A.M.?

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MacUser RATED 5555 December 1996

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MacWorld Magazine, Dec. '96

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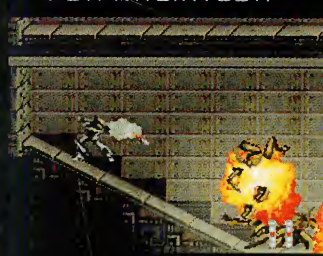
ABUSE FOR MACINTOSH



Check out **ABUSE.** Created by Crack-dot-Com, ABUSE is 360° of side-scrolling action. **Napalm bombs, Lightning Prods,** and the **Death Sabre** are just a few of the toys at your disposal in this fluid and furious game.

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